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Certificate of Ethical Approval

Applicant:	Margaret Medlin
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This is to certify that the above named applicant has completed the Coventry University Ethical Approval process and their project has been confirmed and approved as Medium Risk

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ABSTRACT

The objective of this thesis is to make connections between the fields of media art and dance experimentation in a way that contextualises my own artistic experiments. It takes a wide-angle approach, interweaving time periods and entangling interdisciplinary histories. It utilises a practice-led research methodology that combines two distinct methods: The first is an engagement with the work of diverse artists and scholars who provide various lenses and contexts to examine the interplay between dance and my multidisciplinary arts practice. The second, informed by the first, explores this interplay through the creation of twenty-eight cinematic experiments.

The cinematic experiments are used to interrogate the cinematic frame *as* dance by positioning cinema not as a technology, but as a malleable medium with its own signature movements, contours and dynamics. What emerges from these experiments is: (i) a hybrid frame the viewer can enter that combines the machinery of the proscenium theatre and cinematic frames; (ii) an analysis of experimentation with the cinematic frame as having three active parts - the camera image (materiality), projection (reproduction) and the screen (appearance); (iii) a matrix of terms that presents a mapping of practice combining media technologies with aesthetic outcomes; (iv) and, last, eight ‘slippages’ that reframe classical concepts in cinema history to explore the viewer's perception of movement in cinema *as* dance. Slippage is a term that I have developed and applied to my analysis in order to describe the cinematic frame *as* dance is a powerful tool that can be used to explore with the viewer’s multimodal perception of movement and space. Furthermore, by analysing the viewer in a slippage between different disciplinary lenses I propose there exists a flexibility and potentially limitless number of modes of encounter between the viewer and the cinematic frame. The cinematic experiments do not imagine an ideal spectator but rather explore how the viewer might experience, make sense of, interpret or participate in the cinematic frame.

Key-words
The cinematic frame, screendance, dance, performance, choreography, media and electronic art, cinema history, expanded cinema, the cinematic avant-garde, architecture and design, visual and multimodal perception.

DEDICATION

The thesis is dedicated to my two mothers, Pru La Motte (1928–2020) and Elizabeth France (1940–2011) for the high value they placed on scholarship. Together they gave me the luxury of dual citizenship and in their own special way enabled me to dedicate four and half years to this research.

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STATEMENT OF AUTHORSHIP

I certify that this thesis is my own work and has not been submitted for award of a higher degree elsewhere. Moreover, it does not contain material previously published or written by another person, except where due reference is made in the text of the thesis, as indicated using footnotes on section headings and subheadings. I include sixty-three Vimeo URL links to a series of cinematic experiments made by myself, and sometimes in collaboration with dancers Vicki Van Hout and Patrick Lucky Lartey, cinematographers Jane Castle and Marti Fox, lighting designer and media artist Fausto Brusamolino, media artists Rhian Hinkley, Olaf Meyer, and sound designer James Wilkinson. These collaborators are acknowledged where appropriate in the thesis. I confirm that this research has been conducted in adherence to Coventry University's research ethics policy.

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INTRODUCTION

AIMS

There are two main aims to this thesis. The first is to use the lens of my 'expanded cinema' practice-led research to delve into the properties of the cinematic frame – material, conceptual, perceptual abstract and ontological.[1] Second, is to use this same lens to draw attention to the potential of the cinematic frame *as* dance; where '*as'* is used to enhance a poetic entangling of the cinematic frame and dance to render them as one experience. Both aims are explored through an analysis of my twenty-eight cinematic experiments and what is revealed through this is how the cinematic frame and the different properties of dance combine to generate an aesthetic potential.

My practice-led research is motivated by this potential as it did in my previous artistic works where it galvanised my experimentation and desire to forge new ground aesthetically, collaboratively and technically. Additionally, the interweaving of the cinematic frame and dance's different properties inspired many performances, films and multi-screen installations using early analogue and digital technologies through to state of the art high-end digitally controlled systems that utilise live video, motion-capture, motion-control and robotics technologies. The breadth of my artistic practice scaffolds my approach to dance as an intersection for filmmaking, visual art, media art, architecture and performance. Likewise, my ongoing interdisciplinary engagement enabled me to examine experimentation across multiple fields, which are often kept independent. By using this approach, I was able to balance the value and strength of detailed interdisciplinary practice with the necessary limitations that come from working with less depth in each of the individual disciplines.

Through research and reflection on my artistic practice, I explore the genres of expanded cinema and screendance. In addition to using expanded cinema's

[1] Expanded cinema is the name of an artistic movement that emerged in the 1960s and 1970s and challenged the dominance of the single screen by encompassing film, video performance and multi-screen works (Curtis, Rees, White, Ball 2011).

philosophy as a lens to rupture and reconfigure cinema, I began to explore screendance's history in relationship to the properties of the cinematic frame. Of particular interest is the way the pairing of 'expanded' and 'cinema' opens the nature of the encounter between the two terms. Likewise, the joining of words, screen and dance, become a simultaneous reframing of each other. This led me to engage afresh with the screendance field, and by reflecting on both word pairings I was able to develop anchor points for analysing the twenty-eight cinematic experiments.

Screendance is a niche term commonly used and debated by scholars and practitioners, particularly those engaging with the artist-led *International Journal of Screendance (IJSD),* which began in 2010. For example, it is a term often explored by filmmaker and theorist Douglas Rosenberg (2012, 2016).[2] For Rosenberg experimental is a term less frequently used to describe screendance practice as it can imply that a piece of work may not achieve its stated goal, which is similar to the way I preface my own research. For Rosenberg the term throws open 'the creation of new models of understanding, of meaning making, and of … re-visioning'. He goes on to say that experimental attempts are 'defining new boundaries of expression, are marked by risk, a sense of danger, and the unknown' (2016: 13). It is Rosenberg's notion of risk-taking in screendance experimentation to which I have anchored my own research and equated it with expanded cinema. By rigorously experimenting with the properties, nuances and qualities of the cinematic frame *as* dance, in addition to the two aims above, I also aim to develop an area of screendance experimentation framed by expanded cinema.

As a caveat, I note that although the scope of experimentation in this thesis s important in screendance and has interdisciplinary breadth, the thesis is nevertheless framed around specific aesthetic concerns in my experiments. Therefore, there are critical threads of frame theory such as the politics of

[2] Douglas Rosenberg is a writer, scholar and artist working with film video and performance. He is one of two founding editors of *The International Journal of Screen Dance* and a key figure and advocate for experimentation in the field of screendance.

representation which the contents of the images engage with through the selection of the dancers, which are beyond the scope of the research.

BACKGROUND

Screendance, dance for the camera, dance film and videodance are all terms that emerged from a growing area of practice in the 1970s. These terms developed in parallel to the expanded cinema movement, which I discuss in detail in Chapter Two. Their linguistic connotations were absorbed into and became in turn a canopy of histories, festivals, funding initiatives, collaborations and modes of production. An early example of the use of such terms is the Dance on Camera Festival inaugurated in New York City in 1971. From there the terms developed further in the United Kingdom. The popularity of the term ‘dance for the camera’ stemmed from the BBC's series by the same name initiated by Bob Lockyer in co-operation with Rodney Wilson at the Arts Council of England.[3] Their Dance for the Camera series was particularly alluring for the independent dance sector as it provided funds to make short dance films that catered to a BBC-TV late-night arthouse audience. The resulting films and initiatives were branded and marketed around the world by the British Council, the Arts Council of England and the BBC (Dodds, 2004).

In 1990 I was invited by Australian choreographer Russell Dumas to participate in an initiative based on the BBC Dance for the Camera series.[4] It was funded by the Australia Council for the Arts and took place at the flagship Australia Film, Television and Radio School. After participating, I found my response to this model of screendance was encapsulated by artist Chirstinn Whyte who noted how in such initiatives choreographers were in 'an enforced professional pairing with a technically minded director' (Whyte 2016: 69).[5] In Australia, the program not only match-made choreographers and filmmakers in the way Whyte suggests, but the dancers who were invited by individual choreographers were deemed a shared resource. At the time, I rejected the genre these terms conjured because it

[3] Bob Lockyer was a programmer at the British Broadcasting Corporation (BBC) in the 1980s and 1990s.
[4] Russell Dumas is an Australian dancer and choreographer. After performing with numerous European and American companies he returned to Australia in 1976 and founded the Dance Exchange.
[5] Chirstinn Whyte is a British freelance writer, performer and choreographer active in the screendance field. She was the co-founder and director of Shiftwork, a dance and new media partnership.

appeared this initiative was to educate choreographers in the language of televisual filmmaking. The consequences of this was, in my view, to institutionalise screendance as a 'division of processes into two parts whereby the body provides the dance while the technology does something else like mediation, representation or framing' (Kappenberg 2009: n.p.).[6]

Although I distanced myself from the terms screendance, dance for the camera, and videodance, I continued to be practically involved with screens and dance through various collaborations, creating multi-screen works, directing, producing and teaching. I was resistant to choreographers, dancers and filmmakers being encouraged to create accessible televisual work suitable for television co-productions. I felt my collaborative practice with dancers and/or choreographers for live performances and installation evolved from the amalgamation of my visual art, experimental film and scenography training, and was that of an expanded cinema artist working with light and space. In my early years as an expanded cinema artist, stemming from dance studies, historical references included Loie Fuller (1869-1928) and Alvin Nikolai (1910-1993). These dance makers provided a precedence for a creative focus not only being on the body, but also on its interrelationship to light, space and media. They were pioneers in hybrid practice. For instance, Fuller 'was a researcher intent on understanding and involving all the relationships that light could establish with actions, materials and other media' (Crisafulli 2014:36). While for Nikolai the body was only a molecule that moved inside the image 'assuming the appearance of a dynamic sculptor' (Crisafulli 2014:163). As an expanded cinema artist their legacy embraced yet challenged tensions between the performing and visual arts. Fuller and Nikolai's concerns for the body as both abstraction and experience created a hybrid multi-modal legacy that influenced me. Moreover, their legacy was exciting for me because it could accompany references from photography, and motion studies such as the pioneers Ètienne-Jules Marey and Eadweard Muybridge.

It was in the late 1990's that my on-going frustrations with niche markets and programming under the banner of screendance, dance for the camera, and videodance, which then also included 'dance and technology', coincided with a shift within my own practice towards new media art research. In this new field, my research connected science and art through the provenance of Ètienne-Jules

[6] Claudia Kappenberg is a founder-editor of the *International Journal of Screendance*

Marey and Eadweard Muybridge. In this period through the interpolation of human movement using technologies such as motion capture and motion control technologies, I was able to explore dance as sensory and multi-art visualisations.

In the last three decades, I sought out funding for dance research through science and art funding initiatives. For example, organisations such as NESTA, the Innovation Foundation, (formerly named the National Endowment for Science, Technology and the Arts), the Wellcome Trust and academic institutions all seed interdisciplinary projects through science and art funding initiatives. The funding from such organisations enabled the legitimisation of dance in other fields. One example was maverick performance and media artist STELARC'S *Third Hand* prototype, which entwines gestural sensing and robotics, developed at Waseda University, Japan and used in various performances between 1976–1998. Another is the European collaboration between the Emio Greco | PC's company with media artist Chris Ziegler, and specialist in gesture-based interactive systems, Frédéric Bevilacqua. Together these artists developed a virtual teaching tool in the form of an interactive installation called *Double Skin/Double Mind*. It was then used in an academic research study, measuring participants' experience in the installation that was conducted by Professor of Psychology, Kate Stevens at the MARCS laboratory, University of Western Sydney, Australia. A further example is one of my own projects, *Quartet* (2007), funded by a Wellcome Trust Art-Science Award in collaboration with the Physiology Laboratory at the University of Cambridge. *Quartet* is an example of interdisciplinary research on cause and effect using dance, robotics, computation, and music. This example, and those mentioned above, are attempts to situate dance research through practice within an interdisciplinarity framework that includes non-arts fields such as cognitive and computing science. Interestingly, these dance research projects in combination with scientific research were also a stepping away from the more traditional model of scientific experimentation and placing it within a creative interdisciplinary studio-based human movement research with performance and installation outcomes. It is perhaps because of these initiatives that dance has experienced a shift in research practice and been embraced as a contributor within science, the humanities and technology-driven research. This is demonstrated not only in the

examples above but can be seen by the participation of researchers from diverse fields such as psychology, neuroscience, cognitive science, philosophy, computer science and anthology in the Motion Bank project.[7]

What this and other similar projects demonstrate is how dance through its interdisciplinary collaborations are changing the context of the screendance field. These artworks, performances, research projects and ideas are also finding a critical audience in hybrid conferences such as MOCO International Conference on Movement and Computing, Choreographic Coding Labs and indeed in the *International Journal of Screendance*. However, an in-depth study and analysis of the sci-art funding landscape and history is beyond the scope of this thesis.

Rather than locating my research in pairings such as dance and technology or science and art, I have continued to define my work as expanded cinema. And while the evolution of 'sci-art' initiatives might seem disconnected from my current research into the cinematic frame, the broad scope of ideas invited by these terms inspired me to reflect on the pairing of cinema and dance and consolidate them as the two anchors of my practice. Hence throughout my practice-led research for this thesis, screendance's histories, practices, writings and audiences became critical reference points. Similar to the way Jenelle Porter extends a field that bridges live and mediatised dance, I use the camera not merely as 'a recording device, but as [a] stage and audience simultaneously' (Porter 2016: 23).[8] In this way, the cinematic frame emerges as a system, part of an apparatus, an auteur, an eye and a tool. It becomes a dance partner in a duet where the dance 'dissolves space, and time, as well as the body' (Porter 2016: 34). The work of avant-garde cinema artists in tandem with screendance scholars such as Jenelle Porter and others I discuss in my thesis, anchor my investigation into movements occurring in the replication of the cinematic frame *as* dance.

[7] The Motion Bank project is based in Germany at the home of The Forsythe Company and it ran between 2010 and 2013. It provided an extensive context for producing new knowledge about choreographic research practices.

[8] Jenelle Porter is an American curator of the Dance with the Camera exhibition at the Institute for Contemporary Art Pennsylvania (2009). Her book chapter *Dance with Camera: Body* (2010) was a reference.

My research finds a resonance with screendance through questions posed by Erin Brannigan such as: 'How is the concept and practice of choreography re-configured for the screen? What film-making techniques are appropriate for the production of screen choreographies? Can we determine where the dance ends and the dancefilm begins? What kinds of film structures or forms are best suited to dancefilm?' (Brannigan 2009: 122).[9] My research circles around these questions by asking: What is dance's role in the replication of the cinematic frame? How can the cinematic frame *as* dance (re)frame cinema as a multi-screen medium? My focus is on the generation of dance movement through cinematic experimentation rather than through developing choreographic structures. My questions probe the interactions taking place in the replications of the cinematic frame. And my critical engagement with the screendance field in this thesis emerged primarily through rigorous experimentation, which I went on to develop further through unpicking various influences that I explore in the three chapters.

[9] Erin Brannigan is a scholar, critic, curator and inaugural director of Reeldance, an Australian screendance festival 2000 -2012.

DEFINITIONS

Bespoke definitions for the ‘cinematic frame’ and ‘dance’ emerged through the research and what follows clarifies how I use these terms throughout the thesis.

The Cinematic Frame

The cinematic frame is inherent to photographic and moving image cameras, where it is not only the view finder but a rectangular container. It frames elements within its borders and hence creates compositions. Yet the container is changeable; it moves, and hence is a catalyst generating flux in each composition. According to Sean Cubitt, the rectangular format ‘established by the Lumière was arbitrary’ because it was not dictated by the inventor but the device (2005: 46).[10] Cubitt further states that the frame evolved as a ‘product of all those who had worked in the technologies of picturing over the centuries’ (2005: 46). Sergei Eisenstein (1898 -1948), the prominent Soviet film director of *Battleship Potemkin*, argued against the 'stabilized format for the film screen' (Friedberg 2006: 131).[11] He wanted a ‘dynamic square’, a frame with malleable proportions that was responsive to the needs of the artist. The dynamic square was inherently an argument against the commodification of the burgeoning group of cinema and filmmakers who wanted 'to rely on standard projection gauge for their films to be distributed' (Friedberg 2006: 131). In my research, the cinematic frame is duplicitous and moves fluidly between the artistic medium of Eisenstein and a technical format established by the Lumière brothers described above. As discussed by Gilles Deleuze, we can consider the framed as an open or closed system and therefore it can be thought of as a physical and geometric construction of duration that extends motion and space (Deleuze 1986). It is two-dimensional yet has a three-dimensional volume, an idea explored in Chapter One as a hybrid frame the viewer can enter. Deleuze summaries framing as ‘the art of choosing the parts of all kinds which became part of a set’ that is informatic and

[10] Sean Cubitt is a Professor of Screen Studies Culture and Communication. His writings and scholarship focus on convergent media industries stemming from the core of film, television and radio.
[11] Sergei Eisenstein was a well know Soviet film theorist and pioneer of montage. Notable films include *October* (1928) and *Ivan the Terrible* (1944).

communicates to the spectators through a relatively and artificially closed system. (Deleuze 1986: 18) Importantly to my research, Deleuze states that when it is considered in relation to the point of view ‘the frame is an optical system’ beholden to the perspective of framing (Deleuze 1986: 18). My interest in the cinematic frame resonates with the notion of an optical system but I am looking for what else.

For instance in Chapter One, I explore the notion of the void, as a different kind of place in which to reconsider the time space continuum. A notion where in the cinematic frame is without the foreground, background or horizon needed to provide a perspective. It becomes a spatial void, an unknown space with no fixed spatial parameters. As a precendent for my experimentation with this notion of the void I explore the work of the illusionist Georges Méliès. He developed many techniques such as filming against a black background, thus making the void a technique by which he could create illusions that made it hard to distinguish between what was ‘on’ and what was ‘off’ screen. Méliès’s created an interlocking of theatrical and cinematic apparatuses through darkness to create illusionistic effects. His work is foundational in my practice-research.

For me the cinematic frame is not a verb that ‘separates a particular fragment of the scene for our attention' (Cubitt 2005: 49-50). Nor is it, as Friedberg describes, an encapsulation of a moment or a view of another world. My approach is more like Eisenstein’s ‘dynamic square’ as depicted in Charlie Lyne’s video *Frames and Containers* (2017), because I play with a flexible series of perspectives, an expressive cinematic frame that responds to the needs and interests of the artist. I explore the cinematic frame as a chameleon shifting effortlessly from a stream of images to a rectangular shape, to an object. As a stream of images, it could be said that the cinematic frame is duplicitous because it exists both virtually (as an imagined reality) and physically (as light). As a shape, the cinematic frame is a shifting of geometries that moves boundaries. For Michael Tawa, these boundaries ‘are never simply divisions. Every line always implies and defers to another line – it's mirror,

shadow or double' (Tawa 2010: 95).[12] In this way, Tawa positions the shape of the cinematic frame as an abstract geometry. It is not a fixed window like an aperture creating a cut between inside and a virtual outside. As an object, analogue film is a narrow plastic ribbon with square perforations running along the edge like a railway track. It is coated in emulsion and can be loaded into a camera, exposed to light, bathed in chemicals and then projected to show a recorded image. Because of its materiality, the cinematic frame can combust, fail, replicate, transmit or perish. Its materiality personifies both the standardisation and instability in the cinematic image. After the photographic process, in the moment of projection, the physical frame becomes virtual, an abstraction.

The cinematic frame has three technical forms; the analogue, electronic and digital cinema. Each of these technologies produces an individual aesthetic and I work with each of them alone and in combination. My exploration starts with the analogue cinema where one visual image next to another produces what French philosopher Henri Bergson (1859-1941) called the cinematic illusion of movement (Deleuze 1986). Bergson critiqued the cinema for, amongst other things, 'breaking up time in a sequence of regular units, thus falsifying its unbroken flow' (Rees 2011: 6). Nevertheless, cinema is a medium where every cinematic frame is unique and able to stand alone yet is equally a malleable part of a flexible sequence of frames that has coherence and the potential of becoming other than it appears. In my approach each cinematic frame is a unit that transforms and represents through an aesthetic means where geometry, perspectives and materials bind with any of these technical forms. In the electronic medium the images are recorded as pixels with luminescence and colour values on magnetic tapes and played back or transmitted as a signal. I work in the non-linear digital medium where the cinematic frame is constructed in computer language of 1's and 0's. This language produces a new efficiency in digital processing and can generate random transformations to create new potentials for the cinematic frame. Each of these technologies produces a similar yet unique perceptual phenomena. For instance, each medium processes fluctuations of light creating focus and

[12] Michael Tawa is a Professor of Architecture whose thinking about process and practice in relationship of cinema and architecture has been important to my research.

depth of field through contrasting the foreground with the background. It is relevant to my research that in analogue, electronic and digital cinematic frames these phenomena have different qualities. Likewise, the materiality and apparatuses of the three technologies are important in the context of my practice-led research. I use them as a pallet where their different qualities can stimulate me to integrate a combination of scholarly research, craft, skill, intuition, and decision-making in my experiments.

In Chapter three, I develop a concept of slippage in order to explore the viewer's point of view and their multi-modal experience of the cinematic frame. In this thesis my concept of slippage evolves from not only analogue, electronic and digital cinematic frames but also reframes classical concepts in cinema history to claim the viewer's experience of movement in cinema *as* dance, and to delve into the viewer's slippage between different disciplines.

Dance: A Mediated Perspective

My definition of dance is abstract. For example, it does not correlate with the notion of choregraphed steps, or bodies moving in correlation with music. I became engaged with dance when working as a lighting designer with an Australian choreographer Russell Dumas whose choreographic practice combines interests from modernism and classical dance to everyday movement. Dumas said he assembles his dance phrases like syllables in a Japanese Haiku poem. In my twelve years (1983–1995) of working with Dumas my attention, like his, was focused on balancing details of a body's movement in its relationship to space. In my early work he introduced me to a lineage of dance practice and a community which included: Elizabeth Dempster, Rebecca Hilton, Lucy Guerin and Ros Warby with whom I had separate collaborations. These dancemakers and my own projects led me to see dance and choreography not as separate aspects of a performance, but rather as an organisation of space that is simultaneously *as* dance. In this way I have intertwined choreography within dance. This is different to processes where the dancer and or designers are separate from the choreographic process. My definition of dance from a meditated perspective also stems from the collaborative processes in which I have participated. In this way the focus of my research is on cinematic discourses and does not initiate a discussion of the status of the body in my experiments. My definition of dance focuses on a co-authorship of movement between dancer and myself in a way where I create dance, but not with my body. I first sensed this as a lighting artist working with the changing intensity of the lights, when I found myself inside many and varied dance duets. I thought of the lighting instruments as shifting the audience’s point of view. It was as if I was a conduit – a multiplicity of cameras that sensuously blend and connect the viewer to the dancer. Over the years working with Dumas my lighting practice became one of expanded cinema, fusing lighting, cinema and spatial practices. This interdisciplinary approach informed my loosened definition of dance as an artistic process of creating and/or revealing spaces through movement.

As an expanded cinema artist, what I bring to my research collaborations with dance are responses to the architecture of light, space, movement, image and

media technologies. For me dance is also closely associate with a point of view. I ask who is looking and where from. We know well from Edward Muybridge's chronophotography experiments with humans and animals in the late 1800s that technology reveals movement invisible to the human eye (Smith 2014: 25). Hence, my definition of dance also includes movement of the in-between and the transformations of grains and pixels of light, which are made visible by technology. In this human and technological sharing, the cinematic frame can create dance and vice versa. However, the dancing bodies, the movement vocabulary of the performers in my experiments and my process of working with dancers as collaborators is not insignificant. I chose to work with two dance specific makers because I hoped the specificity of their culturally informed movement practices would transcend my various mediated experiments.

It is also important to me, as a philosophical principle, that those making the dance should call it dance. For example, I am not including a gambit naming of a water fountain as dance, but rather my objective of expanding dance through cinema is an intentional act. For this reason, my approach positions dance as a strategy that not only makes a work of art, but explores abstract movement and how cinematic objects can be considered and structured *as* dance.

METHODOLOGY

This thesis uses a practice-led research methodology that combines the following two methods: Reflecting critically on previous published work by a range of scholars and artists; and, second, iterative cinematic experimentation.

Method 1. Engaging Scholars and Artists

This first method responds to the influences of scholars and artists. It involves scholarly research, watching films and looking at art and cinema. These voices and images of others I used to stimulate ideas that in turn steer my practice-led research. Over the course of researching for this PhD my relationship to scholars changed. For example, in the early years they provided provocations and ideas to explore through practice. In the later stages of writing and reflecting they became ways to understand and contextualise what I had been doing. My scholarly approach to the cinematic frame takes a wide-angle, drawing from a range of disciplines, predominantly media theory, dance studies, film studies, visual arts, and architecture. I also touch lightly on cultural studies, philosophy, phenomenology, the history of physiology and psychology. As will be seen in the chapters ahead, each discipline is relevant to my interdisciplinary approach to research. The scholars and artists that have influenced me have been selected because their fields of study interact with and extend my own research. Some sources will be well known to the reader, but others less known. A short biographical entry on many is included in a footnote as they appear in the text.

The scholars that exerted the greatest influence on my interdisciplinary definition of the cinematic frame are: Sean Cubitt (2005); Michael Tawa (2010); Lev Manovich (media theorist and artist 2001, 2013); Anne Friedberg (historian and media theorist 1993, 2006); and Rudolf Arnheim (perceptual psychologist, film theorist and critic 1957, 1974, 1982). Their work has helped me articulate my thinking and clarify my ideas about the functioning of the cinematic frame. For example, Cubitt's, Friedberg's (2006) and Manovich's (2001) exploration of the cinematic frame as both a mechanical apparatus and a digital technology, helped me tether the relationships between the cinematic frame and the viewer. Tawa and Arnheim on the other hand, articulate the

cinematic frame as a bridge linking cinema aesthetics, architecture and the philosophy of space. Each of these scholars strengthened my approach to theory by revealing bridges within my artistic practice. A further mix of scholars which I identified through interconnecting thematic bibliographic trails, as well as recommendations from peers, also influenced my approach to experimentation with the cinematic frame and its interactions with dance.

Scholars such as art historian and theorist Jonathan Crary (1992), history and philosopher of science Roger Smith (2014), philosopher Gilles Deleuze (1986), and psychologist and film theorist Hugo Münsternberg (1970) all in their own way helped shape my own thinking. A raft of film scholars was also influential, most notably: Ralph Stephenson, Jean R. Debrix (1965), Johnathon Walley (2003, 2007), David Curtis (2009), Tom Gunning (2009) Thomas Elsaesser and Malte Hagener (2010) and A.L. Rees (2011). Through them I sought out elements of history and theory, foraging for things that elucidated my interests, stimulated my imagination and inspired me intellectually and artistically.

I engaged with cinema pioneers George Méliès, and Josef Svoboda who are known to me from earlier research and studies because they interwove the theatrical and cinematic frames. Their experimentations provide key foundations for my practice. Artists and dance-makers from the 1960s and 1970s also provide valuable insights, notably: Hollis Frampton, Malcolm Le Grice, Joan Jonas, Anthony McCall, and Guy Sherwin, Paul Sharits, Peter Campus, Joan Jones, Valie Export, Trisha Brown, Yvonne Rainer and Merce Cunningham. All these people are seminal figures in the linking of movement and performance to visual art. Together they fashion a prism in which I could locate my research. By opening my experimentation to notions such as the hybrid frame and points of view, generated other possibilities for developing my own aesthetics. In other texts, such as Brian Massumi and Erin Manning (2009), I found metaphorical themes that provided keys for me to explore more deeply my nascent ideas. The resulting influences shaped and imbued my topic within a broad but fertile mix of scholarly and artistic practices, which I frame differently in the three chapters to connect my research and experimentation across generations of the avant-garde.

Method 2. Iterative Artistic Experimentation

My second method interweaves artistic practice with knowledge generated through an iterative experimental process. It incorporates artistic collaboration by bringing together small interdisciplinary groups of artist-researchers. This artistic practice produced a series of twenty-eight iterative experiments listed on page 162 that took place between 2017 and 2019. It involved alternating between artistic practice, artistic collaboration, scholarly research, writing and critical reflections on the research. The process allowed me time to respond, refine, receive feedback, adapt and find new solutions that might both transform the original intention, and generate new approaches.

This second method has a synergy with other media art research colleagues such as sound artist and scholar Garth Paine, who stated: 'in my creative work I am always exploring. This is often a more experiential exploration, not focusing on a formal hypothesis but seeking new qualities in the materials I am working with' (Paine, interview quoted in Biggs 2009: 78). Similar to Paine, my research begins not in pursuit of an argument but rather propositions inspired by inquiry and curiosity. I know from my previous media works such as *90% Yield Before Breakage* (1996), *Mobility in an Artificial City* (1996), and *Miss World* (2002) that the cinematic frame and dance interact in a way that shifts the perception and engagement of the viewer. In my thesis, I was curious to know more about the evolution of the principles, nuances and qualities of dance and cinema that result in the viewer shifting their perception. This inspired me to think about dance and cinema as constituting useful materials with which to experiment, reflect and respond.

My cinematic experiments begin by exploring techniques developed in my previous media art practice. Through the iterative process I evolve these techniques by interweaving new practice-led intuitions with knowledge acquired in experiments. Sometimes the experimentation challenged my perceived technical and aesthetic expectations. For example, as I looked for solutions, the iterative experimentation felt risky, but it also had the effect of loosening artistic constrains. And then, as if it could shift the boundaries of my expression, I imagined myself as a cinema pioneer investigating the early twentieth century aesthetics of the cinematic frame. I was able to imagine myself in the 1960s and 1970s, which led

me to experiment with the idea of the apparatus of moving images, the materiality of analogue cinema and of electronic media art. The experimentation did not seek to explore cinema as an art form, but rather to position the cinematic frame as a complex form and research tool.

To represent the scope of my research, I selected thirty-seven examples from the twenty-eight experiments and their iterations. The experiments not presented in the chapters are highlighted in yellow on page 162. These experiments were omitted because they were either less explicit on a topic or represented a steppingstone to future work. Using the selected thirty-seven experiments I developed a matrix (page 68 Chapter Two), which maps proximities between terms that came to represent the aesthetic relationships between techniques and technologies, and between transformations in the forms the experiments were encircling such as the cinematic frame, the theatre frame, liveness and expanded cinema.

The cinematic experiments are an articulation of an artistic and collaborative research process. Creating these experiments involved working with two dancers Vicki Van Hout and Lucky Lartey in a number of ways. First, and most traditionally, I worked with them to create dance movement phrases. Second, by exploring the movement of the camera in parallel with the dance vocabulary and capturing it on digital video and 16 mm motion picture film. The third process involved generating movement, through graphic design and post-production techniques. With the last process I worked alone with the dancers' dance recordings exploring fragments of moving images. I utilised the cinematic apparatus to test ideas for rechoreographing the filmed dance movement as discussed in *Experiment No. 7 (*page 55). This last approach is not an adjunct to film genres such as fiction, documentary or Cinéma Vérité, but like the silent cinema these experiments are mute. Therefore, aspects of a video's ability to accentuate immediacy through the recording of synchronised sound are ignored. The combination of my two methods mobilised the interplay between doing and thinking by integrating scholarly critical attention and reflection with the inspiration, messiness and curiosity that is generated by artistic practice.

OVERVIEW OF CHAPTERS

This thesis comprises an introduction, a prologue, three chapters and a conclusion. The prologue is an introduction for the reader, and it provides instructions on how to access the cinematic experiments online and protocols for moving between the thesis text and the online experiments. Chapters one, two and three interweave my scholarly research with the twenty-eight artistic-practice experiments outlined in method two. Each chapter explores themes arising through my practice-led research. For instance, each chapter highlights how various historical influences emerge differently in the experiments. The cinematic experiments are numbered according to the order in which they were created but are presented in a different order for the sake of structuring the ideas in the thesis. A summary is provided at the end of each chapter and finally a conclusion. My personal biography interweaves throughout the thesis providing the redline which motivated my reflections regarding expanded cinema and screendance. My biography binds the three chapters to the aims, methodology and the conclusion.

CHAPTER ONE

THE HYBRID FRAME: *Exploring the relationships between the proscenium theatre frame, the cinematic frame and screens.*

In this chapter I introduce the practices of George Méliès and Josef Svoboda, two twentieth-century pioneers who interwove the theatrical and cinematic frames. I explore how blending the proscenium theatrical frame and the cinematic frame creates a hybrid frame, which crafts filmic moving images you can enter. Once the notion of a hybrid frame is established, I expand on two of its attributes; the void and the edge of frame, and their choreographic qualities. From here I reflect further on my experiments to explore how dance with multi-media technologies in the twenty-first century can utilise the hybrid frame and how they can, and indeed are, redefining the boundaries of the cinematic frame.

CHAPTER TWO

THE MATRIX: Camera (material), the projector (reproduction) and the screen (appearance)

Chapter Two explores how my cinematic experiments draw the viewer's attention to an opening up of cinema that connects expanded cinema with dance. The experiments are investigated through a selection of artists from the 1960s and 1970s who were instrumental in opening cinema to include liveness, sculpture and the cinema machine. Through an analysis of their works, I reflect on my own aesthetic interests by deconstructing the cinematic frame into the following three categories - the camera image (materiality), projection (reproduction) and the screen (appearance). My experiments, when reviewed within these three categories, offer examples of how new dance emerges from expanded notions of cinema. Later in the thesis I present these three categories in a matrix (Fig. 21 page 98) that combines a range of terms germane to cinema that guided and evolved with my practice-led research.

CHAPTER THREE

SLIPPAGE: An interplay between the viewer, dance and the cinematic frame.

This chapter examines how the cinematic frame influences the viewer’s perception. It probes what I call a ‘slippery’ relationship between the cinematic image and the viewer. Of particular interest is the viewer's perceptions of dance and how the cinematic frame constructs their perspective through the eye of the camera. Another focus is dance's intimate connection to the notion of a point of view. I probe nuances of subjective and objective experience beyond conventional binaries. I apply the concept of slippage through eight slippery relationships that create movement in relationships between the view and the cinematic frame. Exploring this concept required a vertical study of films and texts in the philosophies of Gilles Deleuze, the Soviet and Dadaist filmmakers of the early twentieth century to the nineteenth century scientific explorations of the human senses.

PROLOGUE: EXPERIMENT NO. 1

The inclusion of my first experiment, created in 2017, as a prologue foregrounds my thinking with the cinematic experiments. It also sets up a protocol for the reader to engage with the experiments throughout the thesis. The selected location for the experiments is intended to strike a relationship with the text and aid the reader's journey. To watch the experiments in tandem with reading the thesis the reader will need to have internet access and follow the invitations to watch the Vimeo URLs provided, and then return to the text. The experiments are mostly mute and of various lengths. Some take place across four screens, but they are presented across one on Vimeo. For all the experiments in your browser it is recommended to turn off the auto-play setting. I have used the Chrome browser without problems. However, some readers have found if a Vimeo URLs is sticking that another browser such as Firefox works. There is additional text available on Vimeo but it is not intended as part of the thesis, as the ideas provided in those texts are mostly incorporated into the thesis. The text and project credits are provided on Vimeo for the general public who might locate the experiments online.

The following experiment reflects the themes explored in the prologue. The reader is invited to view the experiment online now and return to it for reference while reading the chapter.

Vimeo URL: *Experiment No. 1 The Frame*
https://vimeo.com/230261586

In *Experiment No. 1* the dancer strikes several poses in a corner. I overlay and insert a series of black 'traveling matts' – shapes that juxtapose what is inside the frame with what is outside the frame. These matts create positive and negative spaces that focus the viewer's attention on the dance gestures in the image as well as creating a new rhythm. There is a ruthlessness and defiance in the edited intersections between the dance and the composition of the matts. *Experiment No. 1* references Sean Cubitt's proposal that 'the frame identifies, gives identity and unity to its contents.' As he says, 'the individual frame cannot bear this burden'

because the viewer is too aware of what the frame excludes and ‘we want to see what has been excluded' (Cubitt 2005: 47). As the matts become a border that obscures the view, they play with the viewer’s vision, teasing it to the centre of the frame. As Peter Gidal notes, ‘by blocking that which could be seen behind a censoring barrier' a voyeuristic gaze becomes destabilised’(1980: 148).[13] *Experiment No. 1* looks as if there are two projectors overlaid on the one screen. The insertion of the matts as cinematic framings can also be perceived architecturally because the rectangle edges of the frame unify the image as compositions to contrast the framed with the unframed. The various rectangles conflate the inside and outside of the cinematic frame, which truncates the dance poses. These intersections demonstrate the power of the framing and editing to create or change choreographic structures and understandings. The segmentation of poses created by the inserted matts also reproduces the original dance sequence as several new dances, and therefore encourages the viewer to imagine the dance as multiple phrases.

There are a number of media theorists who have examined the relationship between the inside and the outside of the frame, notably Anne Friedberg and Lev Manovich.[14] Friedberg, like Cubitt, suggests that 'for the film spectator, the frame of the screen forms a tableau like a proscenium, forcing our vision to centre its gaze while implying a continuum of space lingering just off-screen' (2006: 165). Lev Manovich, on the other hand, who explores the ontology of the frame says, 'the presence of the screen doubles the viewing subject, who now exists in two spaces: the familiar physical space of [their] body and the virtual space within the screen' (2001: 104). These perspectives from Cubitt, Friedberg and Manovich bring to the fore the cinematic frame as a dynamic confederation between the camera image as (material) and the overlaying of a projected frame (reproduction) on a screen (appearance) which I discuss in Chapter Two. Analysing *Experiment No. 1* with media theory demonstrates that through my engagement with scholars I am able to discuss my experimentation with the cinematic frame *as* dance. In

[13] Peter Gidal is an experimental filmmaker and film theorist. He was active in the structuralist film movement in London in the 1960s. He studied psychology prior to experimental film. His films from 1967 to 2013 are collected in *Conditions of Illusion.*
[14] In addition to being an author, Anne Friedberg is also a scholar in cultural and media studies.. Lev Manovich is a theorist in digital culture.

other words, by interweaving their various perspectives of the cinematic frame's scope my objective is to support this discussion. Additionally, I am able to demonstrate the ways in which the cinematic frame can be used as a research tool to explore diverseness and transitional boundaries of dance.

CHAPTER ONE

THE HYBRID FRAME: Exploring the relationships between the proscenium theatre frame, the cinematic frame and screens.

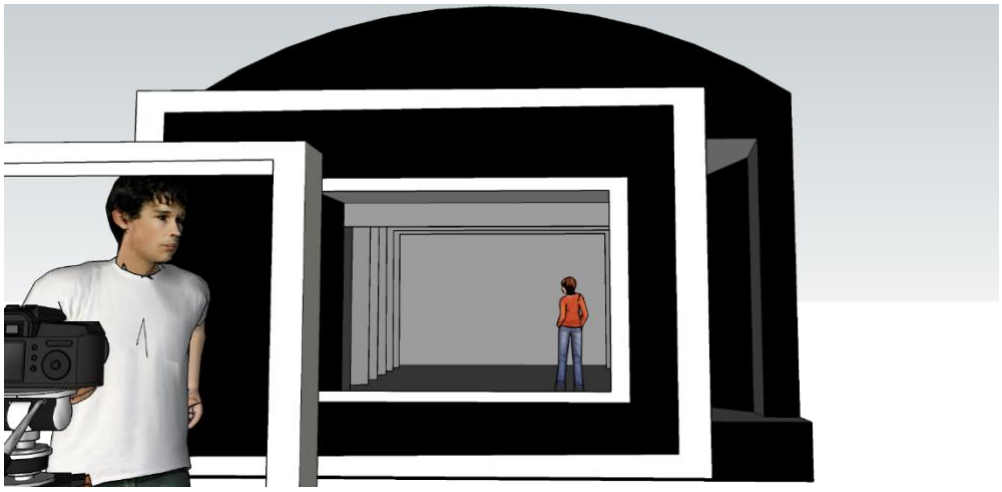


Figure 1: Comparing a cinematic frame and the proscenium theatre frame. Image Medlin M. (2017).

The following experiment reflects themes explored in this chapter.

Vimeo Url: *Experiment No. 19C The Frame as a Sculptor*
https://vimeo.com/313954453

1. EXPERIMENTING WITH THE FRAME

Over hundreds of years of art history the picture frame has evolved to the window-like aperture of the cinematic frame. Rudolf Arnheim notes that in Europe it was roughly in the fifteenth century that the mobility of the framed picture was an 'external manifestation of a social change' (Arnheim 1974: 51).[15] It marked a point where art was becoming detached from its traditional surroundings, in particular the walls of the church. There was also a separation of religious art from nature where the frame became an intermediary, a means of comparison between two worlds – the inside and the outside the frame. The emergence of the frame also marked the commodification of art for the domestic marketplace. Wealthier people

[15] Rudolf Arnheim was a perceptual psychologist active between the 1950s and 1980s. He wrote extensively on visual perception and was also a theorist and critic of art and cinema. I draw on his ground-breaking book *Film as Art* written in 1932 and reprinted in 1974.

were commissioning paintings in frames, mainly portraits, for the walls of their homes. In the 1800s, art, science and architecture turned their attention to understanding human vision, which further propelled a change in attitudes to the frame and perception. During this era, the developments in science and architecture trained us how and where to look. I discuss this in greater detail in Chapter Three. It informed and transformed human vision through technologies such as the proscenium stage, dioramas, panoramas, photographs and the first cinema. John Berger in his television documentary *Ways of Seeing* (1972) speaks on the history of modern art, noting how this accumulation of technologies was defining our experiences. Moreover, he claims these technologies instilled in Western European art the idea that 'perspective makes the eye the centre of the visible world' (Berger: *Ways of Seeing* 1972). As Berger points out, in these mobile images the viewer is continually prompted to orientate themselves to the image. Building on this accumulation of meanings and interpretations of the cinematic frame over time my experiments explore the dynamics of cinematic frame.

My intention in this chapter is not to speak about my experimentation with the cinematic frame as a mobile flat perspectival image, such as a painting or a photograph. On the contrary, I explore the cinematic frame in an interdisciplinary context; as a cross-over between the cinematic frame and illusionistic proscenium theatre frame, where 'the spectator always remains at the same distance from the scene of the action' (Arnheim 1957: 82). We know the photograph is flat and as Geoffrey Batchen states, while it provides 'an indexical truth-to-presence, it does not necessarily offer a truth to appearance' (2006: 29/30).[16] The viewer imbues the photograph with a lot of other information. Importantly, we know the flat photograph is the basis of cinema but the interchange between the frames of photography, theatre and cinema are not straight-forward. For instance, we know what lies adjacent to a photograph because it is beyond the edge of frame. Arnheim argues that cinema as a form sits midway between the theatre and the photograph. He deconstructs this saying that the cinematic frame 'presents space

[16] Geoffrey Batchen is a professor of the history of art and as a curator he focuses on the history of photography.

and does it not as on the stage with the help of real space, but, as in an ordinary photograph, with a flat surface' (Arnheim 1957: 25). The photograph like the cinematic frame's representation of space is essentially 'something of the nature of a flat, two-dimensional picture' (Arnheim 1957: 26). For the viewer, it is the expectation of a passage of time that portrays it as an event. He goes on to note that the cinema and theatre frame have an unlimited potential for transforming spatial dimension because of their duration. As a consequence, cinema only creates an impression of space because time creates an illusion of an event that holds the viewer.

The experiments I discuss in this chapter, for example *No. 2 Zooming* and *No. 7 Perspective,* engage with Arnheim's notion of space in the cinematic frame. These cinematic experiments do not didactically deconstruct the perceptual differences between the photograph, the cinema and theatre frame. Instead they demonstrate the way in which the cinematic frame creates illusions of depth, space and time thus distinguishing it from the single photograph but not from the theatre. With these experiments I consider how for the viewer the properties of scale, movement and bodies in space compares and contrasts the proscenium theatre frame with the cinematic frame. Furthermore, with these experiments I try to imagine a viewer's awareness of the cinematic frame. Does their sense of the cinematic frame appreciate its comparisons to, and transitions from the proscenium theatre frame, and the photograph?

1.1.1 Pioneer: Georges Méliès

Marie-Georges-Jean Méliès (1861–1938) was an illusionist. He is one of two discussed in this chapter and who informed my practice-led research, the other being Josef Svoboda (1920–2002). Both were pioneers who combined the theatrical and cinematic frames. Their work is a precedent and provides a context for my research proposal that screen space mixed with the void (a black image featureless space) such as the rectangle matt frames overlaid in *Experiment No. 1 (*page 24*)* can extend the cinematic frame *as* dance. By interweaving the spatial qualities and technologies of the proscenium theatre and cinematic frames I am able to explore the potential for movement between them.

Before the illusionistic proscenium theatre frame evolved, after the transition from gaslight to electricity in the 1820s, illusionistic techniques were developed in closeted darkness by spiritualists for séances. Spiritualists used techniques such as magic lantern projections in conjunction with mobile translucent screens to create reflections. These techniques made things appear to float in a spatial void conjuring ghostly apparitions. Film scholar Tom Gunning says Méliès's work is an extension of the early phantasmagoria devices of the 1800s where the projector was hidden behind a screen as a means of denying the screen's existence (2009: 34).[17] Méliès was interested in the occult and hence his films and live popular entertainment built on the apparatuses used in séances. His apparatuses fooled people, hence achieving the intended effect of creating magical powers. As an illusionist, he developed many techniques such as filming against a black background thus making the void a technique by which he could create illusions that made it hard to distinguish between what was 'on' and what was 'off' screen. Méliès's interlocking of theatrical and cinematic apparatuses through darkness to create illusionistic effects are foundational in my practice-research. By filming in a void, he could also create unique layers of action that were sandwiched in front or behind each other. In this way he was the 'first master of the cinematic third dimension' (Cubitt 2005: 43). Méliès's technique of filming multiple layers of optical printing on a single filmstrip to build up the layers of action made it possible for

characters to appear as if by magic, or to multiply within a scene, in much the same way as chromakey technology or green screen is used today. It was through these techniques that Méliès was able to conjure fantastic ‘abnormal, monstrous forces [to] emerge [and] disrupt the equilibrium of normal, everyday reality' (Hammond 1974: 9).[18] His staged illusions, like the earlier phantasmagoria, seamlessly combined live projection and scenery to intentionally blur the boundaries between cinematic space and physical space.

This process can be seen in his films: *The Four Troublesome Heads* (1898), *The One-Man Band* (1900), *Man with the Rubber Head* (1902), *The Melomaniac* (1903).

Figure 2: *The Four Troublesome Heads* (1898). Film still Méliès G*.*

Figure 3: *Man with the Rubber Head* (1902). Film still Méliès G*.*

[18] Paul Hammond is a writer, painter and translator. In addition to his book *Marvellous Méliès’s* (1974) he is the co-editor of other books of cinema history such as *The Shadow and its Shadow: Surrealist Writing on the Cinema* (1978).

Figure 4: *The Melomaniac* (1903). Film still Méliès G.

Méliès's techniques do more than expand the spatial dimension or transform the frame through layering. They demonstrate an early use of a technique to construct a multiple of parallel, spatial, temporal and aesthetic realties. These are techniques I utilised when working with dance filmed against a black background and which are demonstrated in my experiments later in this chapter. His once laborious theatre and film techniques, although now easily made with new technologies, are still being explored with interesting outcomes in contemporary film and performance. From Méliès's work to mine, I trace a history from the mechanical to the digital.

1.1.2 Pioneer: Josef Svoboda

The second pioneer I cite as a precedent for my experiments is Josef Svoboda (1920–2002). Svoboda was a Czech artist and scenic designer who also combined the theatrical and the cinematic frame. As noted by Chris Salter, 'experimentation, research, invention coupled with a mastery of technical materials marked Svoboda's scenographic practice' (2010: 49).[19] In the 1950s, Svoboda began to integrate cinema and live actors within a hybrid aesthetic. His creative ideas were initially developed within the constraints of the Czechoslovakia censorship regime and the technology that was available to him in the 1940s and early 1950s. In the 1950s, he taught and worked at the National Theatre in Czechoslovakia where he trained 'specialists, engineers, and technicians to raise the operation to a consistently professional level' (Burian 1971: 8).[20] Through this

[19] Chris Salter is an artist and scholar. He is Co-director of the Hexagram network and University Research Chair in New Media, Technology, and the Senses at Concordia University, Montreal.
[20] Jarka Burian is a scholar at the University of Albany USA. He has written two books on Joseph Svoboda. The importance of Svoboda's work is also now acknowledged in scenography and inter-

he was able to transform the 'infrastructure of the National Theatre in Prague ... into ...a *scenographic laboratory* – an interdisciplinary, experimental research environment with professionals from chemistry, engineering, optics, physics and architecture in order to create new technologies which potentially could be used on stage' (Salter 2010: 49). The mix of specialists working with him enabled a high level of experimentation.

Each of Svoboda's designs evolved into a complete scenography. 'Svoboda imagined the production space [as] a hybrid between atelier and film studio, made almost endlessly reconfigurable by modular technical devices' (Salter 2010: 50). By 1958, artists in Czechoslovakia were free to experiment beyond naturalism without it being denounced by the Czechoslovakian regime as aesthetic formalism (art for art's sake). It was in the late 50s and 60s that Svoboda's multi-screen integration stunned the world. Svoboda's *Laterna Magika,* developed with director Alfred Radok in 1957, one of two brothers with whom he regularly worked, was one of his first internationally recognised contributions to the use of filmic projections. The world fair in Brussels in 1958 saw the full realisation of the *Lanterna Magika,* where 'visual images of the stage and of external reality were …placed in new relationships and created new dramatic elements and a new theatrical reality' (Svoboda quoted in Burian 1971: 53). Also presented at the world fair was *Polyekran* created by Svoboda and the director Emil Radok. *Polyekran* literally translates as a multi-screen kinetic mosaic. In *Polyekran* and *Laterna Magika,* the act of combining or juxtaposing multiple cinematic frames was to build a 'vivid sense of separate elements imaginatively combined to express new insights into reality' (Burian 1971: 91). The *Lanterna Magika* was subsequently developed into the *Wonderful Circus* (1977), which takes place in a circus tent where the canvas walls are transformed by thirty-five-millimetre film projections and the performers alternate between live and projected presences. Through these practices Svoboda turned the theatrical frame into an interface between live

disciplinary histories such as: *Future Cinema: The Cinematic Imaginary after Film,* Shaw and Weibel (2003); *Staging the Screen the use of Film and Video in the Theatre*, Giesakam (2007); *Entangled Technology and the Transformation of Performance*, Salter (2010); and *Active Light*, Crisafulli (2013).

and cinematic realities and introduced the potential of a viewer having two parallel relationships to a live performance.

Svoboda's legacy contributed to a reinvention of the theatre by introducing the moving image as multi-layered architecture. Importantly, Svoboda was not bound to the conventions of cinema or theatre. His theatre was 'incorporating the inventions of the scientific era, and in the process, revolutionised production design in Europe' (Salter 2010: 49). Svoboda's multi-image innovations reject habitual and binary relationships between the viewer and the cinematic frame, and between the architecture of the cinema screen and the proscenium theatre by challenging the convention that there is one point of view, or that a single composition can fully convey a cinematic concept in the theatre. It was his genius in combining cinema and theatre that reinvented theatre scenery transforming it from physical objects and representations of space to a dramaturgical concept resulting in layered meanings with which the viewer could conceptually engage.

Figure 5: *The Last Ones* (1966). Svoboda J.

The above illustrates the evolution of the Laterna Magika technique (Burian 1971: 101).

Figure 6: *Their Day* (1959). Image Svoboda J.

As noted by Burian, *Their Day* is a production that integrated aspects of 'Polykrean technique, especially in the mobility of the screens and the combination of live actors and screened images' in order to create a variable sense of stage space and a multiple impression of locale (Burian 1971: 94).

1.1.3 Building from Méliès and Svoboda

I present the work of Méliès in tandem with that of Josef Svoboda because, although they took different approaches, they both experimented with the potential of combining the physical theatre frame and the virtual cinematic frame. They harnessed expertise in stage craft and lighting to erode the division between cinematic and theatrical frames. They were both blending these two frames trying to escape each of the frame's rhetoric, which I will describe shortly (page 38) through the examples of Eisenstein, Vertov, and Cocteau. Méliès transformed the cinematic frame into a traditional static black theatre stage and Svoboda did the reverse by developing the cinematic as an immersive environment and dramaturgy on the theatre stage. Svoboda's techniques, acknowledged for the use of projection and multi-media combined with live work, invites the viewer to think about the difference between a screen, the content of the cinematic frame and the surface on which it appears. He extends both the immersive quality and ingenuity of Able Gance's historic three screen epic *Napoléon* (1927) by synchronising multiple screens in stage scenography. Méliès's multi-layering in the one image transformed the cinematic frame from a two-dimensional cut-out into an illusion offering the viewer new realities. They both created new spaces through the gaps

and seams between frames and screens which is an idea I explore below in section 1.3.1. Their techniques and experimentation set a radical precedent, which are now ubiquitous in contemporary performance across dance, theatre and visual arts.

The cinematic experiments discussed in the remainder of this chapter emulate and build on Méliès's and Svoboda's techniques. I consider what it would have been like inventing techniques and machines in the eras of Méliès and Svoboda. And I question how, in their time, the cinematic image was informed by industry, entertainment and science. Did they know they were formulating new techniques and inventing machines? What were their experiences of changing live theatre? I wonder how free they felt to experiment, and I reflect on how I might be challenging preconceptions of the digital apparatus in the twenty-first century. Reflecting on their influences, I thought about how artists integrating technologies are now in a very different position than these early cinema pioneers. For example, one can appreciate how experimentation today is informed by the expanded cinema and others movement in the 1960s and 1970s, which is a theme I discuss in Chapter Two.

Building on Méliès's and Svoboda's ability to invent machines, which I do with experiments such as experiments *No. 25A, B* and *C Drumming* (page 59), I intend to challenge the standard use of multimedia technologies. My practice with digital technologies reflects on Lev Manovich's suggestion that aesthetic standardisations in computer image software have now proliferated the image (Manovich 2001). Manovich notes that most contemporary images can be aesthetically identified with the software from which they were produced, because marketplace software defaults towards uniformity, that artistic experimentation and the adaptations of technology are being replaced by 'companies such as Microsoft, Adobe, and Apple' (Manovich 2001: 92). Hence, it could be said that in contemporary practice, independent programmers, hackers and designers have been bought or edged out of a booming marketplace. While conducting my experiments, I reflected on the work of Méliès and Svoboda with cinema and theatre technologies, and how their interdisciplinary and multi-media legacies

pushed the boundaries of practice against utilitarian functionality, commodification and standardisations. And in my experiments, by using a mix of analogue film and digital practice, I aim to resist the uniformity to which Manovich refers. In my research the blending of analogue and digital film practice is a strategy that resisted the homogenisation media for the reason the combination allows me to push boundaries and explore differences. My twenty-first century experiments with media technologies place me in the shoes of Méliès and Svoboda, as someone working against the industrialisation of multi-media.

1.2 EXPERIMENTING WITH THE HYBRID FRAME

The following two experiments reflect the themes explored in Chapter One. The reader is invited to view these experiments online now and return to them as points of reference while reading the rest of the chapter.

Vimeo URL: *Experiment No.11A Theatre & Cinema Frames Overlaid*
https://vimeo.com/406821198
This experiment was created using Sketch-up software and it overlays the proscenium stage and the cinematic frame. It shows a hybrid frame as a three-dimensional cube one can enter. It is from a series of experiments titled *Frame as Sculpture*.

Vimeo URL: *Experiment No. 13 Studies in Framing* https://vimeo.com/467580773
This experiment is also part of the *Frame as Sculpture* series. I use a physical cube placed in front of the camera as an external device to look at the way the frame works with various subjects. I also compare the framing of the physical cube with virtually modelled frames.

There are synergies and differences in the way the theatre and cinematic frames focus an audience's attention to meaning and events. Early filmmakers often reflected or rejected their prior connection to the theatre in their filmmaking. For instance, Soviet filmmaker Sergei Eisenstein reflected his theatrical background in his epic cinema structures. At the same time, his counterpart Dziga Vertov conceived of cinema as a totally new medium. Alternatively, Jean Cocteau, intertwined his interest in theatre with cinema because he thought 'cinema allowed him to seize upon the drama from many angles' (Bazin 2005: 93).[21] By using the cinematic frame he could define the viewpoint of the viewer, who is a common denominator between stage and screen.

The synergies and differences between theatre and cinematic frames continue to evolve. Today, they entwine the complexities of new media frames and screens.

[21] André Bazin is a French film theorist and critic who wrote about the importance of realism in cinema.

Michael Tawa, introduced on page 13, examines the frame's constitution as comprising a 'dynamic field of symmetries, asymmetries, orthogonal and diagonals that can be equally conjugated to create interactions and combinations of compositional and dynamic potential' (Tawa 2011: 97). Here, Tawa provides a proposition that can be understood to speak about a frame's spatial parameters as transferable across the disciplines of architecture, theatre and cinema. For Tawa 'every frame is [...] an apparatus for looking' (2011: 37), and that a frame's compositional and dynamic potential can be thought about abstractly and philosophically. Another perspective which dramatises the frame's relation to the world comes from Cocteau who according to Bazin said that 'cinema is an event seen through a keyhole' (Bazin 2005: 92). So, Tawa suggested that the frame (cinematic, theatrical or architectural) is a contextual lens, while for Cocteau the cinema provides mystery.

My cinematic experiments create a hybrid frame that entwines the proscenium theatre and the cinematic frames. Rather than Cocteau's keyhole, the hybrid frame is open like Tawa's inclusive apparatus for looking. Through the hybrid frame I hope to contest Arnheim's proposition that the cinematic frame represents space with 'something of the nature of a flat, two-dimensional picture' (Arnheim 1957: 26). My experiments with the hybrid frame set out to explore how spatial complexities created through linking a multiple of hybrid frames combine *as* dance to break with the notion of a two-dimensional representation of the frame. In the hybrid frame, I explore how movement becomes the vehicle that transforms volume, light and time. It is movement in the hybrid frame that induces the spectator into a cinematic illusion of depth. I work with lighting technologies and scenography as an event to accentuate motion and the depth of field between two bodies. For instance, lighting and/or the camera can score the inter-change between two bodies as foreground and background. Through this hybrid frame one can experience the cinematic frame with the volume of the proscenium theatre as a space that can be entered rather than a slice or a section.

1.2.1 Experiments In The Void

As light on the proscenium stage is directed away from the wall and floor it becomes, like the cinematic frame, a different kind of place in which to reconsider the time space continuum. Both frames become a spatial void, an unknown space with no fixed spatial parameters. In other words, they are frames without the foreground, background or horizon needed to create a perspective. Without these elements the void challenges human perceptual expectations because the viewer cannot use visual markers or reference points to orientate themself to their surroundings. So how is the viewer's perspective established? Arnheim states this kind of 'effect can be avoided only by showing enough of the surrounding [of] the picture to give the spectator his bearings' (1957: 32). As Arnheim suggests, the architectural parameters of the proscenium theatre or cinematic frame could compose the elements to give the viewer their bearings. In my experiments, I explore the aesthetic potentials in a space where the spectator's spatial bearings are unfamiliar.

In the following sub-section, I reflect on my experimentation within the void where the bearings for the viewer come from bodies moving within the frame. Here my experiments interrogate screen space and explore how the void can extend the viewer's experience beyond gravity. I also test the projection of these images onto surfaces to provide another architectural context. Through the void, I consider what is known about the frame when a body moves out of it. With this in mind, my experiments use the void as a tipping point for phrasing or scoring endings with new beginnings. Working in a void reminds me of Erin Brannigan's question, introduced on page 11, 'How can we determine where the dance ends and the dance film begins?' (Brannigan 2009: 122). Through experimentation I explore the featureless void's effects on the dimensionality of a dancing body. I ask, can I use the void to experiment with how a dance might become a dance film? Or, how is film a dance? With these questions I consider where to place the emphasis. For example, is the emphasis on determining if dance film is any more or less film or dance?

The following experiment reflects the theme of the void. The reader is invited to view the experiment online now and return to it as needed.

Vimeo URL: *Experiment No. 2 Zooming* https://vimeo.com/288141540
Experiment No. 2, draws the viewer's attention to the zoom function of the cinematic frame.

My early explorations test standard framing techniques such as close, medium, longshots and zooms. I found they became less evident because dance movement can fluidly change proportions within the cinematic frame. Moreover, in the void these changes seem to be a reduction of uniformity and predictability of dance movements. While making *Experiment No. 2,* I wondered how dance movements challenge the standardisation of framing and how *as* dance, I could suspend and subvert the volume of the cinematic frame. I contemplated on Les Levine's notion that it was the small size of the television screen that led to the development of the zoom lens 'because given the size of [the] rectangle' (Levine 1978: 81) of a television compared to the cinema screen, the potential of the screen space was minimized.[22] Hence the smaller screen space required the camera to zoom in closer to the subject and the zoom lens offered the viewer both detail and a sense of intimacy or proximity. In this second experiment, I simply setup a scenario where the zooming of the frame interacts with the movement of the dancer. In this example the zoom appears to act not simply as a way of offering more detail of the dancer but rather appears to motivate a movement link between the visual of the camera and the dancer.

In my early experiments, I tested Brannigan's question to see if I could say where a dance ends and the dance film begins. I tried out a reformulation of Brannigan's question, changing it to: How can the combination of the void, movement and the frame ostensibly limitlessly reframe the body in space? In other words, I investigated the void, movement and the cinematic frame as parameters for how

[22] Les Levine was born in Ireland 1935 and later moved to the New York City. He was a sculptor and pioneering video and conceptual artist in the 1960s and 1970s.

dance and film are defined. In my investigation I found the combination of the void, movement and the frame are interesting to explore as variables.

The following three experiments reflect the theme of the void's capacity to limitlessly reframe the body in space. The reader is invited to view these experiments online now and return to them as needed.

Vimeo URL: *Experiment No. 5A The Void*
https://vimeo.com/316684724
Vimeo URL: *Experiment No. 5C The Void - Four Screens*
https://vimeo.com/263953765
Vimeo URL: *Experiment No. 5D The Void - As Wall Projection*
https://vimeo.com/349028590

Experiments No. 5A and *C the Void* explore a movement phrase where gravity is invisible. They explore the reframing potentials of the hybrid proscenium and cinematic frame. *Experiment No. 5D* is a documentation of *Experiment No. 5C* in the *Cinematic Experiments* installation.[23] As an ensemble the three experiments show a variety of ways I can iterate source material.

With these three experiments I exaggerate the dance movement by connecting multiple frames thereby extending screen space and time. Working across the screens, I use the void to manipulate the dance movement's speed and orientation. In experiments *No. 5A, C* and *D*, I propose that in the void one can create a stronger focus on the body in space. With these experiments I also explore how the void makes it impossible to anticipate the development or next direction of the movement phrase, but is able to connect screens *as* dance in a multi-screen environment. In this way experiments *No. 5A, C* and *D* produces a dance across screens with an unstable relationship to both gravity and the viewer's perspective, inside and outside the hybrid frame. A viewer often assumes

[23] *Cinematic Experiments* was included in the Dance Massive Festival, March 14 and 17, 2019. It was presented by The Substation, Melbourne, Australia and was developed in situ through a public art residency at the Altona Gate Shopping Centre between January 21 to March 18, 2019. The media art team was Margie Medlin, Olaf Meyer, Rhian Hinkley and James Wilkinson. The exhibition made a cross section of the experiments available to the public. In a large pop-up shop of 14 rooms we called *The Digital Art Media Lab* the audience was invited to bring a sense of curiosity and explore how they could interact with the experiments.

'if something moves in the picture frame this motion is first seen as the movement of the thing itself not the result of the movement of the camera gliding past a stationary object' (Arnheim 1957: 32). This assumption demonstrates the viewer's bias to their grounded expectations of being in the world. In experiments *No. 5A and C,* the void makes it difficult for the viewer to determine if it is the camera, the dancer, both, or the transition across the frame's edge which are priming the movement. The void's lack of reference points supports the notion that the combination of the camera and the dancer's movement around the frame's edge intertwine and stimulate the viewer's perceptual experience. In these experiments, the viewer could easily be disoriented and reoriented by the exaggerated speed and capacity of the dancer's movement. The cinematic frame *as* dance is enhanced by the viewer's disorientation. In any of the experiments one can see that the first appearance of a moving body sets the scale and perspective, which can be reset with every consecutive cinematic frame. Hence, for the viewer, the constant reframing makes it difficult to be sure they are looking from the front, back, left, top or bottom.

Experiment No. 5D is a documentation of an iteration of experiments *No. 5A* and *C.* It is mapped to and projected across a wall. It demonstrates that film of the human body in the void when projected on a surface adapts to the surroundings and perceptually connects the viewer and the movement in the frame to the architecture. Hence, the viewer can simultaneously adopt and ignore 'the gravitational framework of physical space' (Arnheim 1982: 53). Moreover, the viewer is invited to concurrently inhabit two worlds, the virtual intangible void and the physical architecture. In *Experiment No.5D* the movement qualities of the screen body are extended by the architecture gaining a surface materiality and dimensionality. Through its blending with physical space this screen body acquires a capacity for spatial transitions, for example, by flying out of the corner of the room and falling from the ceiling.

The following three experiments reflect the theme of the void. The reader is invited to view these experiments online now and return to them as needed.

Vimeo URL: *Experiment No. 14 Studies in Framing* https://vimeo.com/311376923
Experiment No. 14 compares the frontal static camera in the void with the moving camera in the void.

My experimentation with reframing using the void is not a new idea in the history of cinema or screendance. We see it in the early films of Méliès such as *The Four Troublesome Heads* (1898), *Man with the Rubber Head* (1902), and *The Melomaniac* (1903) discussed on page 30. Méliès, like others, used a static frame in the void to achieve multi-layered works.[24] In *Experiment No. 14* I worked with both a static and mobile camera. I compare filming in the studio with a mobile camera using a wheelchair dolly, and a static camera. On the left, we see the dance with a fixed view. On the right, though a cube from the *Frame as a Sculpture* series, we see three versions of the interaction between the movement of the dance and the camera, with each reframing presenting a different punctuation in the dance. The framing comparisons show how each camera movement creates a synchronicity with the dancer to reveal three unique interpretations of the dance.

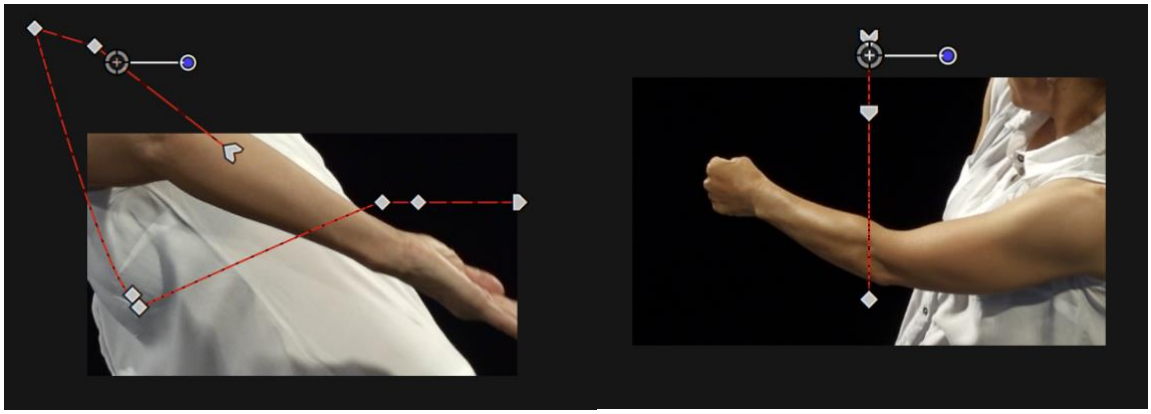
Figures 7 and 8: *Experiment No. 14 Studies in Framing,* show to the left the fixed frontal camera perspective in the void and to the right the camera dollies to reveal movement being reframed. Image Medlin M. (2019)

[24] This technique can also be seen in the work of Canadian filmmaker Norman McLaren's awarding winning film *Pas de deux* (1968) and *Nascent* (2005) by Gina Czarnecki produced by Forma and the Australian Dance Theatre.

The following three experiments reflect the theme of the void. The reader is invited to view these experiments online now and return to them as needed.

Vimeo URL: *Experiment No. 15A The Camera Moves*
https://vimeo.com/311664082
Vimeo URL: *Experiment No. 15B The Camera Moves*
https://vimeo.com/311776848
Experiments *No. 15 A and B* explore the flexibility of post-production camera movement in the void.

With experiments *No.15A* and *B* I create minimal post-production animated camera movements, which imperceptibly reframe the bodies to create new perspectives. *Experiment No.15A* also uses the dancer's entering and exiting of the frame to make the frame unstable, an effect enabled by the void's lack of background. In the void, the virtual camera movement's reframing of the dance hampers the establishment of a fixed view. As opposed to the fixed camera in the examples of Méliès's films, my experiments explore a perceptual accentuation of movement enabled by the void. For instance, in experiments *No. 5A* and *C* the movement is across screens while in *Experiment No. 14* it is the physical camera that is moved and in experiments *No. 15A* and *B* it is a virtual camera inside the frame created by moving the frame in post-production.



Figures 9 and 10: Postproduction camera animation created with Final Cut Pro X editing software *Experiment No. 15A The Camera Moves.* Image Medlin M. (2019)

The following experiment reflects the theme of the void explored below. The reader is invited to view this experiment online now and return to it as needed.

Vimeo URL: *Experiment No. 17B Digital Duet* https://vimeo.com/406754465
Experiment No. 17B creates a spatial duet between the hybrid frame by inserting a series of digital objects.

Experiment No. 17B sets-out to explore the reframing potentials of the hybrid proscenium and cinematic frame voids using digital objects. In *Experiment No. 17B,* the dancer's sequence traverses the frame with entrances and exits on the left and right of frame. The cinematic frame is like a proscenium stage where, between the front and back of the stage, the stage's depth and edges are designed to provide a slipstream of appearance and disappearance. For the viewer, their relationship to the quasi proscenium stage is orientated through this common relationship to gravity and perspective.

Experiment No. 17B compares a sense of the expected with the unexpected. The frame is interrupted with geometric digital objects that recompose the limits of the frame. The dancer enters from the black edge of the frame or appears from the centre of the white digital object. It could be said that through the void the viewer shares the common ground of a proscenium theatre stage with the performer. However, when the digital objects appear the dancer and the viewer no longer share this common ground. It is as if the fourth wall in the theatre has been broken and hence the viewer must suspend their disbelief and accept that the dancer and digital objects interact in a shared space. Besides, it is when the proscenium theatre stage is transformed by the digital objects that the viewer becomes immersed in a virtual frame and therefore no longer rooted by the earth's gravity. Instead, they are primed for new orientations through the digital objects.

Extending from the frontal view described above in *Experiment No.17B,* working in the cinematic void, I found there were no literal spaces and no entrances and exits. Instead the frame represented an experience of temporality, a quasi-reality or an illusion. The frame was neither open, closed, full, empty, dormant or

complete. It could be huge or small, close or far. The void decommissioned the central composition and the frontal notion of 'the single-point positioning of renaissance perspective, [that] the theatrical architecture began to favour' (Friedberg 2006: 163). Rather, the void was synonymous with the cinema because the viewer/camera could be looking at a single point anywhere within 360 degrees. Figure 11 below depicts multiple points of view. Each of the six apexes represent a viewpoint looking towards a hybrid frame. I propose that in the void this cube is a kinetic and volatile space – a space that is liable to change its appearance at any moment and therefore like dance, which can change its front and orientation without warning, has a dynamic potential for altering the viewer's perception.

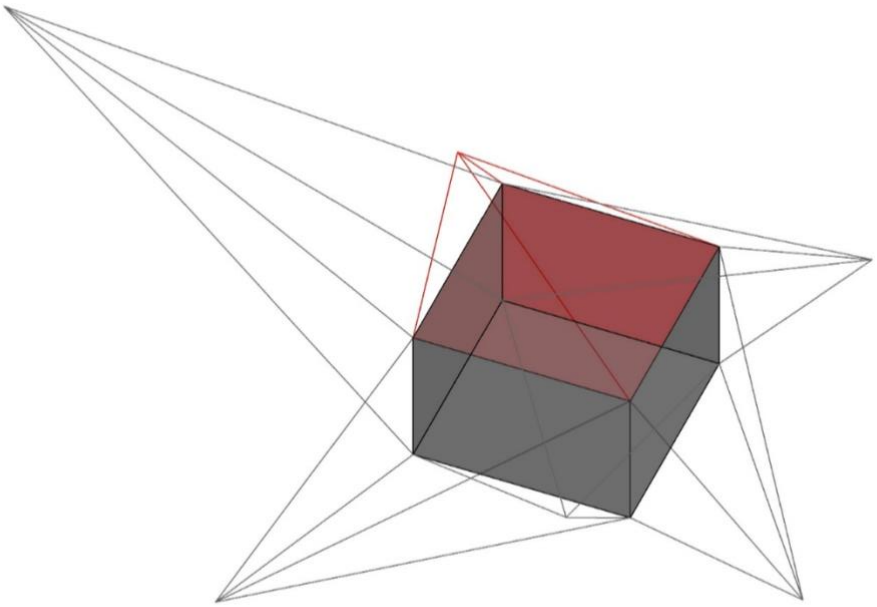


Figure 11: *Hybrid Frame,* from the *Frame as Sculpture* series (*Experiment No.11A* (page 38) and experiments *No.19B (*page 60), *No.19C* (*Experiment No. 19C* page 27) and *19F (*page 88)). A hybrid theatrical and cinematic frame, a space you can enter with elasticised viewpoints from 360 degrees. Image Medlin M. (2018).

In experiments *No. 15 A* and *B* and *No. 14 and No. 17B* the void combines with the movement it shrouds, which act as influential spatial markers. The void becomes like a body of water that connects various terrains and enables something to surface at any point. It allows for spatial interventions and for moving image sequences to be truncated without necessarily making the dance seem

disjointed. The void, in tandem with a screen, can initiate new phrases that transpose beginnings and endings, similar to cutting a worm in half. In these ways the void enables a dance to become infinite because it creates space in sequences for loops to be constructed. Moreover, in experiments *No. 5 A, C and D Flying, (*page 42) and *Experiment No. 14 Studies in Framing (*page 44), experiments *No. 15 A* and *B The Camera Moves (*page 45) and *Experiment No. 17B Digital Duet (*page 46) the interaction between the mobility and freedom of the dancer, together with the camera and screen technologies offer dance in the void a vast field for choreographic experimentation with both old and new media.

1.2.2 Experiments With The Edge Of Frame

The viewer's gaze must pass and repass to hold the edge, because 'the edge is actually in continual variation' (Massumi, quoted in Manning 2009: 86).

The following two experiments together with experiments *No.5 A and C* (page 42) explore the edge of frame. As before, you are invited to watch them now and return to them for reference.

Vimeo URL: *Experiment No. 9 Inside the Frame* https://vimeo.com/288139127
This experiment is part of the *Frame as Sculpture* series. There is a duet between two dancers and two hybrid frames, which explore the malleability of dance material recorded in the void.

Vimeo URL: *Experiment No. 21 Rectilinear Lines* https://vimeo.com/314690392
This experiment highlights the notion that the frame's geometry and the rectilinear lines provide consistency, which is intercut with the idea of exploding the horizonal and vertical edges of the frame.

The rectangular edges of the proscenium stage and cinematic frames generate a compositional utility comprising of fixed horizontal and vertical proportional

geometries, apertures such as the 16:9 envelope or 3:4 square. According to Arnheim:

> the four sides of a rectangular frame have a characteristically ambiguous function. On the one hand they can ignore gravity and be equally orientated towards the centre of the rectangular space. As the top border presses down toward the frame toward the centre, the bottom border pries upwards symmetrically, and the two lateral borders press inward. There is a centrifugal expansion in all four directions as well (Arnheim 1982: 53).

For Arnheim, it is the frame that gives unity to the consistency of the frame's horizontal and vertical geometries due to their actual geometries in the physical world. My experiments build on Arnheim's compositional uniformity by using the void to provide an ambiguity in relationship to gravity. The void is a way of exploring a non-hierarchical interdependence between each of the frame's four edges. Moreover, I explore what can be called the frame's ambiguous edges, as well as creating the unity suggested by Arnheim (1982) and Friedberg's (2006) as discussed on page 25, to indicate a fragmentation where a viewer can consider the edge of the cinematic frame as an invisible seam that carries spatial meaning.

As seen in the experiments, although the void obscures the edge of the frame the cinematic frame is still a container with four edges. This is demonstrated in *Experiment No. 5 A* (page 42). In this experiment the edge of the frame creates four seamless meeting points between the four cinematic frames and the physical space of the installation. André Bazin describes the edge of the frame in cinema as a 'mask which allows only part of the action to be seen' (Bazin 1967: 105). Moreover, he creates a distinction between the theatre and cinema when he says 'there are no wings to the screen'(Bazin 1967: 105). In this sense, Bazin reinforces Sean Cubitt's notion that what is masked sparks the viewer's curiosity for what is not seen. *Experiment No. 9 Inside the Frame (*page 48*)* aims to stimulate this curiosity and two frames in it can be considered as active structural devices to study how the frames' edges function in combination with each other, or individually. It's composition reframes the space by layering it with a horizon and two three-dimensional digital frames. In the layer between the horizon and digital

fames, I insert a solo dance and a dance duet. The two digital frames carve out a double stage. With the dancers they are like a quartet each accentuating the dance between elements. In this experiment there are eighteen edges of the frame that could be used to create choreographic phrasing. In *Experiment No. 9*, the edges of the two frames bridge the physical world of the dancers and the virtual world of the 3D frames, which can be considered *as* dance between a virtual on-screen visibility and a literal off-screen invisibility. Sean Cubitt comments that Méliès devised 'tableaux' to reveal the perimeter of the screen and in so doing defined 'off-screen' as a viable space (Cubitt 2005: 43). In *Experiment No.9* the edges of the two frames play with the potential of an 'off-screen' space. Viewed this way, the edge of the frame can be seen as playing a vital role in the dance. The frame's edge, whether in a void or not, makes subjects and objects appear or disappear. It describes and re-describes the transitional quality of their movement and the details of the journey between visibility and invisibility.

Many film theorists discuss the complexities of the relationship between 'on' screen and 'off' screen. The void, and its effect on the edge of the frame, contributes to this discussion. Steven Heath, a British film theorist, makes the distinction between 'on screen' and 'in frame' saying that, ''on screen' serves as an occasion to consider the relationship between the cinematic image and the conditions that underlie its production', whereas ''in frame' shifts the focus to how the viewing spectator related to what's on the screen' (Stephen Heath quoted in McDonald 2016: 97).[25] Heath's distinction prioritises that which is made visible, in the frame, through the moving image frame's construction process, and positions the production process as secondary. However, in *Experiment No.9* (page 48) the double framing shows both the production process and the 'in frame'. It exposes how the 'in frame' influences the function of the edge of frame. In the void, the spatial categorisation of the edge of frame shifts from forming a container to becoming part of a series of gateways, an idea which can be likened to Bazin's wings on the proscenium theatre. The edge of the frame is neither on-screen nor off-screen. It simply joins and divides aspects of perceivable space. I do not

[25] Kevin McDonald is a North American scholar of film and cultural theory. His focus is on cinema history, media industries and contemporary Hollywood. Stephen Heath is a British film theorist and one of the founders of *Screen* an international journal of academic film and television in the 1960s.

consider this space around the frame as a 'diffuse space without the shape or frontier that surrounds the screen' (Andrews 2004: xvii).[26] Rather, it is substantive, a substitute gravity and perspective and therefore influences the viewer's experience of movement and space. I experiment with the cinematic void in tandem with the edge of frame to beckon the viewer's imagination. The edges of frame can enable the viewer to make conceptual connections and to imagine movement pathways between action on screen and off screen.

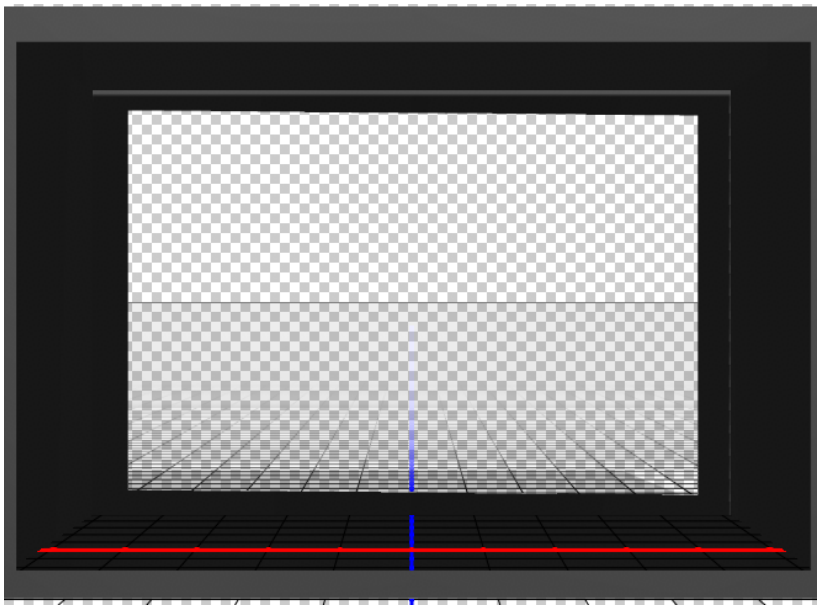


Figure 12: A empty frame in a 3D software shows the frame as creating perspective. In the void we are only aware of its inside edges and the screen's outside edges.

Below are examples of how the edge of a cinematic frame extends dance:
The edge creates transitions in invisibility from one frame to another.
The edge of the frame is an initiator, changing the object or subject from live to inanimate, invisible, and non-existent.
The edge creates a gap between moments.
The edge creates points for entries or exits at any part of the frame.
The edge inserts anticipation into the frame.
The edge creates a continuation between what we can and cannot see.
The edge of frame separates the virtual from the real.
An edge of the frame is a point of transition, of beginnings and of endings.

[26] James Dudley Andrews is a North American film theorist. He has written about major film theories. He has also written extensity on and translated the works of Bazin, A.

The edge of frame orientates the viewer.

The edge of frame suggests gravity.

The cinema and the proscenium theatre are designed to accommodate the edge of the frame.

1.3 EXPERIMENTING WITH MULTIPLE SCREENS

An iconic futurist example of the cinematic frame mapped across screens occurs in the scenography of the feature film *Blade Runner* (1982), where multiple-screens hover in a global skyline. This kind of fantasy of screens in public space has become synonymous with the character of our twenty-first century as a semi-virtual architecture. However, Richard Koeck tells us to 'bear in mind that spaces and places seen in movies never truly mirror spatial reality but are mediated and altered by the medium itself; a filmic illusion at best' (Koeck 2013: 1).[27] Nevertheless, in a contemporary twenty-first-century paradigm, *Blade Runner's* prediction for a society existing in a mixed reality of filmic illusion and smart urban dwelling spaces does not seem all that fanciful, and the idea of new spaces divergent from spatial reality inspires curiosity. Society is regularly presented with new versions of virtual and augmented reality images generated by the computer and embodied by human movement through technologies such as motion capture and gaming. My experiments are informed by professional experience with the computer-generated technologies created and used in the *Miss World* (2002) and *Quartet* (2007) projects discussed on page 20. Through these projects I created performance systems that responded to a society that was edging society ever closer to a constant interplay between mixed realities. Hence, my experimentation for this research with the multiscreen medium is intended to build on understandings from these previous multiscreen works and further explore the artistic potential of digital systems. Working in collaboration, and in a public space, I explore the kind of media space heralded by Marshall McLuhan as instigating 'the social effects of change' (Friedberg 2006: 17). This is a space where media immerses societies as contemporary flâneurs in a visual mobility between data streaming and screen architecture where the viewer can, like in *Blade Runner* (1982), become a passive consumer. In 1980 Jeanne Thomas Allen writes in *Cinematic Apparatus* that screen technologies underpin 'the perspective film technology advances in the direction of an ideal cinema which evermore fully represents the world of sensory experience as passive' (1980: 26).[28] In my

[27] Richard Koeck is a British scholar, architect and transdisciplinary designer. He has written six books on various aspects of the intersections of cinema, architecture and urban design.
[28] Jeanne Thomas Allen is a North American feminist scholar of mass culture and media criticism.

experiments I engage with screens as a ubiquitous delivery format in the public domain where the experiments work against a passive experience. The screens are connected, versatile, and programable. Their versatility offers a participatory means to generate a multiplicity of images across multiple screens. The use of multiscreen technologies in my experiments are means to generate and explore a diversity of aesthetic and experiential relationships between moving images. Through experiments *No. 7 Perspective and No. 28 Split Screen* (page 55) and experiments *No. 25 A, B,* and *C, Drumming* and *Experiment No. 26, Jumping* (page 59) I explore the seams, the space between and across screens and frames that emerge in tandem with the viewer's perceptual experiences and in some cases their gestural transformations of these spaces. Furthermore, I explore the movement and plasticity of space in emergent spaces between and across screens and frames. By using a bespoke array of digital technologies I consider again how Méliès and Svoboda felt as they experimented.

1.3.1 Experiment No. 7

In the following two experiments I examine dance as a seam, a bridge, and movement in the space between and across screens. Experiments *No. 7* and *No. 28B* explore not only the relationship between the inside and outside of the frame, but also the way gaps, intervals, continuities and ruptures between the frames interact with the dances.

The reader is invited to view these experiments online now and return to them as points of reference while reading the chapter.

Vimeo URL: *Experiment No. 7 Perspective* https://vimeo.com/264031362
Vimeo URL: *Experiment No. 28B Split Screen Short* https://vimeo.com/446341166

Experiment No. 7 Perspective is a further iteration of the dance phrases in *Experiment No. 1 The Frame* (page 24). The four screens show four perspectives of a dance in a corner. The viewer sees the dancer roll into frame and stick to the walls as if magnetised. The dancer galvanises the screens through a sequence of tableaux; screens that at first appear to echo the sequence in a dance cannon. The composition enables the viewer to connect to a singular dancer and yet conjure this singular body as an ensemble of bodies thereby engaging them in a multiplication of movement patterns and rhythms. Alternatively, the viewer may be focused on trying to compare the different ways which one body looks from different angles.

Experiment No. 28B Split Screen Short is similar to *Experiment No. 7* because I planned a multi-screen frame and filmed the dance accordingly. For example, in *Experiment No. 28B* I planned to stitch the two halves together which required dividing the void stage space in half. I ask the dancer to repeat the same sequence, so I could film the left side and then the right. In the editing software I attempted to bring the two takes together, but the dance performances in each take were different in both time and space and I felt it would take a lot of work to make the two halves coherent for a viewer. Moreover, it would require me to focus on creating major aesthetic choices while editing, which was not the intention of

the experiment. In fact, I found the premise of the experiment more interesting as a failure. I needed either to record the two spaces left and right simultaneously, accept the discrepancies as I had in *Experiment No.7*, or be prepared to edit the sequences making aesthetic choices while editing.

In *Experiment No.7 Perspective,* I composed the frame with an architectural corner to problematise the role of horizontal and vertical axis of the cinematic frame as suggested by Arnheim and discussed on page 49. My engagement with both architectural and perceptual qualities of the corner also encouraged me to seek ways to consider cinematic framing in an interdisciplinary context. Michael Tawa is instructive on this point when he says, 'the framing of space constitutes a *setup* that brings to relation different elements within an interactive field' (2010: 91). He goes on to say that 'the implications of these relations are aesthetic, political, philosophical, ethical, narrative, and dramatic' (2010: 91). In *Experiment No.7* I consider how the four screens constitute a *setup* and form an interactive field comprising variations in a danced movement phrase. Together these phrases are an interplay of aesthetic parameters such as dance poses, scale, textures, colour, orientation, entrances and exits, camera movements and perspectives. In each frame, the corner setting contrast and compare the horizontal and vertical axis to create a perceptually deceptive anchor. The architectural accumulation with its different orientations is disorientating. As an interactive field, the four corner settings depict the cinematic frame's malleability in a multi-screen composition, whereas the four camera perspectives create a composition of oppositions. However, a synthesis does evolve across the screens because the viewer's 'eyes never take in the visual composition at one go' (Massumi, quoted in Manning 2009: 86). On the contrary, the viewer's eye continually roves over the dance and the screen, detecting the edges as the dancer enters and fixes to the corners. The progression of the sequence hangs on two things; one, the dancer's movement variations one moment to another and, two, the viewer's focus shifts from one screen to another. These two versions of the dance sequence through synchronisations and offsets tunes the interactive field, which further depicts the cinematic frame's malleability. It becomes an interactive field provoking different philosophical, narrative and dramatic questions about the dancer and the dance

phrases to the original single sequence. The experiment binds the singular with the other through a multi-screen environment as a reinvention of a typical plot taken from narrative cinema. For example, when there are four dancers rather than one, they project new philosophical and aesthetic meanings. My own interpretation is that the viewer is less likely to ask who she is, where she is, what she is doing and therefore, in this *setup,* the viewer's answers tend to be more philosophical and poetic than narrative.

I rummage further in Tawa's (2010) notion of a cinematic frame that is at once architectural, philosophical and cinematic to challenge my practice to further explore the complexities and interrelationships between cinematic framings. Tawa's proposal widens the lens as he sees the frame not as limited to cinema but rather as having multiple contexts. The frame:

> can operate as an intensive framework for inclusion and exclusion, in which case it will always be concerned with delineation and closure. Or it can operate as an extensive and excessive field that both delimits content and harbours its transgression – a setting that enables [a] *mise en scene* of appearance-disappearance to take place because of its openness to the unframed (Tawa 2010: 100).

I understand Tawa's suggestion here as a concept that casts the frame as being something more than a container. It offers an alternative, an open framework for transitions where movement can be redistributed and reassigned. Movements instigated by the frame can change relationships, gathering about them non-narrative perceptual structures, triggers and influences such as direction, scale, sequence and scores such as canons. These phenomena quickly shed and gain meaning as well as transgress the dominance of a dance movement context. These frames are not only fluid in their relationship with movement, but they can be fickle appearing dominant in one medium and then another. Tawa suggests the 'frame mobilises singularities in their otherness to each other and to what is other or beyond the frame itself' (2010: 97). In *Experiment No.7*, this citation helps to describe how the singular dancer unites the viewer with the frame's orientation

and helps the viewer enter the perceptual complexities and inter-relationships in the dance.

In *Experiment No.7 Perspective* (page 55), the composition of a disjunction of screen orientations is observed as a new choreography where the dancer is both creating and solving visual and rhythmic puzzles. The screen placement is rechoreographing the original dance. The nature of rechoreographing offers itself as a proposition for each of Brannigan's questions from Chapter One (page 11) - 'How is the concept and practice of choreography re-configured for the screen? What film-making techniques are appropriate for the production of screen choreographies?' (Brannigan 2009: 122). *Experiment No. 7* is more than an artistic response to a curiosity about Brannigan's questions. It builds and extends Brannigan's concept of a choreography, re-configured for the screen, by replicating the cinematic frame through a movement composition that is (re)framing cinema as a multi-screen medium *as* dance. This multi-screen medium addresses what film-making techniques are appropriate for the production of screen choreographies. In *Experiment No.7*, I intend that each of the four frames become, for the viewer, access points into the movement between the multi-screen environment (compressed on to one screen for Vimeo). For instance, it rouses the viewer's imagination with an insinuation of movement based on the connective tissue between screens. The elongated stitched frame is a gateway to the image in visual art, alternate temporal spaces and galleries where the screen becomes a new architecture. Screen spaces such as in *Experiment No.7* are for and of cinema, but they are also an experimentation with the broader materiality of cinema *as* dance. Together they explore the question 'where exactly [does] the limit or threshold of the film lies?' (Elsaesser and Hagener 2010: 37).[29]

[29] Thomas Elsaesser (1943-2019) wrote on film history and held many academic positions. The last was in 1991 when he founded the Department of Film and Television Studies at the University of Amsterdam where he was the Chair until 2000. Malte Hagener studied with Elsaesser at the University of Amsterdam 1996-97He is a co-founder of *Necs – European Network for Cinema and Media Studies.*

1.3.2 Experiments No. 25A, B & C and No. 26

Figure 13: *Cinematic Experiments* documentation*, Experiment No. 25B Paper Smashing.* Image Medlin M. (2019).

Figures 14 and 15: *Cinematic Experiments* documentation*, Experiment No. 26 Jumping* Image Medlin M. (2019).

The following experiments *No. 25*A, *Manipulated Fragments, B, Paper Smashing* and *C Frame Grabbing (Drumming),* and *No. 26 Jumping* reflect the themes explored in this segment. The reader is invited to view these experiments online now and return to them as points of reference as needed.

Vimeo URL: Experiments *No. 25 A, B, & C Drumming,* https://vimeo.com/330579860

Vimeo URL: *Experiment No. 26 Jumping* https://vimeo.com/330597577

Each of these experiments' programming parameters trialled different connections between the gesture of a visitor and a dance outcome. Similar to *Experiment No. 7* these parameters examined the concept of dance as a seam, a space between and across screens, using different media architecture. The Vimeo URLs for experiments *No.25 A, B,* and *C Drumming* and *No.26 Jumping* are edited documentations from my installation *Cinematic Experiments* (2019) (page 42). The experiments were constructed using selected experiments from my library of experiments *No. 16A, B, C, No. 19B, No. 20, 20A,* and *No. 24* see (page 162). This library of source experiments is not discussed although the reader is invited to view them online as a reference for the experiments.

Experiments *No. 25 Drumming (*A, *Manipulated Fragments, B, Paper Smashing* and *C Frame Grabbing),* the library source experiments are:
Vimeo URL: *Experiment No. 16B Full Sequence* https://vimeo.com/311834174
Vimeo URL: *Experiment No. 16C Manipulated Fragments*
https://vimeo.com/349050071
Vimeo URL: *Experiment No.19B The Frame as a Sculptor*
https://vimeo.com/313954295
Vimeo URL: *Experiment No. 20 Paper Smashing Real-time*
https://vimeo.com/314379644
Vimeo URL: *Experiment No. 20A Paper Smashing Slow-Mo*
https://vimeo.com/316706862

Experiment No. 26 Jumping the library source experiment is:
Vimeo URL: *Experiment No. 24* EFX Camera vs Post Production
https://vimeo.com/316688744

Experiments *No. 25*A, *Manipulated Fragments, B, Paper Smashing* and *C Frame Grabbing (Drumming),* and *No. 26 Jumping* were installed in a shopping centre in order to invite the public to trigger movement across and between screens. Similar to the Australian Research Council (ARC) Linkage project, *Large Screens and the Transnational Public Sphere* (2009–13), my experiments explored the creative and

public use of urban screens to recalibrate ideas of what is possible to do with others by combining public art and screen technology. The ARC linkage project focused on the notion of the design of media cities and explored large public screens akin to *Blade Runner's* screens. The investigators included Nikos Papastergiadias, Scott McQuire, Ross Gibson, Audrey Yue, Sean Cubitt, Cecelia Cmielewski, Dooeun Choi, Amelia Barikin and Xin Gu who all used public screens to connect a real-time community art project in Australia with a community art project in South Korea. The question in the ARC Linkage project was around space, time and the journey of cultural transmission. Their research in the viewer's engagement with transmission between global capitals was predated by a Melbourne based multi-media dance company, Company in Space and its 1990s real-time transmission performance series *Trial by Video* (1997). One iteration of *Trial by Video* (1997) took place between Melbourne and Hong Kong. In the transmission, Company in Space enmeshed hybrid twin humans, one in Melbourne and the other in Hong Kong, through a telecommunications system where the twins co-authored a real-time audio-visual dance. Through the transmission of movement data the performance opened up the unknown time-space dimensions of the space between screens. For example, the two events co-authored a real-time camera dance that extended the physical and virtual space for live audiences. The *Trial by Video* series reconfigured the dancers as the 'site' of the space between frames and screens.

My research does not focus on a globalised community or on different cultures interacting in real-time, but rather is concerned with the metaphorical, perceptual and physical space in the seams between screens and across screens. Although I am similarly intrigued by the potential shifting of the relationship between viewers and artworks/performances through media networks, my experiments engage with screens that are physically next to each other. Some ten years on from the ARC research project and eighteen years on from *Trial by Video* series, experiments *25A, B,* and *C Drumming,* and *No.26 Jumping* use current media technology to expand the sphere of real-time interaction with screen technologies. My experiments, like their predecessors, create new sites and new time-space dimensions with the cinematic frame. They play with screen placement and have a

synergy with the dramaturgical arrangements in Svoboda's projection designs as shown in Figures 5, and 6 (page 34). My experimentation with screen placement can also be compared to Méliès's images that overlay and intersect with layers of action. Each of these artists and their projects explore how a multiple of media screens brings human movement together to create new spaces and meanings. My experiments – like *Trial by Video* and aspects of *Large Screens and the Transnational Public Sphere* – are choreographic. They differ from each of the precedents because it is each visitor's gesture that is able to uniquely choreograph the movement across and between the screens.

Experiments *No. 25*A, *Manipulated Fragments, B, Paper Smashing,* and *C, Frame Grabbing (Drumming)* and *experiment No.26, Jumping* (page 59) explore the choreographic potential of multiple screens in a public space. In collaboration with interaction designer Olaf Meyer experiments *No. 25 A, B,* and *C* and *Experiment No. 26* were designed to prioritise the visitor's experience. Through the programming capacities of Isadora software we were able to quickly develop real-time responsive systems. It also enabled an open and extended experimental platform to augment the interplay of dance with screen technologies. Experiments *No. 25 A, B* and *C* uses an electronic drum kit to invite the visitor's gesture and *Experiment No. 26* uses a mini trampoline. Each of these interfaces are configured with a flexible multiscreen system and each system invited visitors to literally interact in different ways by triggering a real-time animation of digital dance. Hence the intersections between screens in these experiments correspond with a viewer's real-time gestures.

I observed in experiments *No. 25 A, B* and *C Drumming,* that when the digital dance is mapped across the six screens, it demonstrates a versatile screen space. The six screens can act as one, six or become fractions. Like *Experiment No. 9 Inside the Frame* (page 48), they create a screen space of multiple edges of frame and together they produce a multiple of confluences between the inside and outside of the cinematic frames. In *Experiment No. 26 Jumping*, the gestural mappings produce an animation of the dancer's mid-air splits that playfully entangles real-time images of the viewer jumping across a composition of virtual

screens. Both experiments create an interpolation of the visitor's gestures that demonstrate the flexibility of cause and effect in digital media. In this way, the visitor's gestures created unique choreographic structures. As I worked with the systems I felt like a geographer in new terrain.

My work in terrain of screen compositions across multiple frames is not without a spectrum of precedents. In narrative cinema there is the split screen, in music theatre there is the example of the *Maganiya Seduction* (2006) where forty musicians in a scaffold tower of individually lit frames are conducted. Closer to screendance is Liz Aggiss's *Men in Wall* (2003). These examples mostly depict discrete parallel actions developing a larger composition. There are also examples of interactive artworks creating choreographies from the general public's interaction. Interactive artworks such as *Boundary Functions* (1998) and *Deep Walls* (2002) by Scott Snibbe and *People of People* (2010) by Rafael Lozano-Hemmer are examples of these interactive artworks.[30] Although I admire these works and their contribution to expanding the interdisciplinary field, I focus here on artists who, like myself, are engaged specifically within the field of dance. In the early 2000s choreographer Ruth Gibson, part of the artist duo Gibson/Martelli, made new works that significantly contributed to the entanglement and potentiality of dance and media technologies.[31] Gibson/Martelli's work is a bench mark of a dancemaker generating the interaction between dance and media technologies. There were also other duos of choreographers and artists, companies and works that developed dance with media technologies that are also significant. Examples include Christian Ziegler with choreographer Jayachandran Palazhy *Scanned* (2002); Company in Space's large multidisciplinary team that produced *The Light Room* (2002); Gideon Obarzanek's and media artist Freider Weiss's *Glow* (2006); and Hiroaki Umeda's *Accumulated Layout* (2009). However, in all these contributions I found the audience was a witness to dance with mediatised interaction that was only more or less apparent. Whereas, in the various iterations

[30] Scott Snibbe offers pioneering examples of interactive art and augmented reality. Many of his early ideas were later developed for applications such as WhatsApp. Mexican artist Rafael Lozano-Hemmer's *People on People* (2010) real-time installation is made to place visitor images inside each other following his interest in creating experiences of co-presence.

[31] Gibson, R. M., B.*Gibson/Martelli* [online] available from <https://vimeo.com/gibsonmartelli> [18 November 2020].

of Gibson/ Martelli's *Summerbranch* series, the camouflaging of the body in the natural world, the properties of the technology are implicit if not the theme. This particular series is effective in combining Gibson's choreography with the natural environment and media technologies such as motion capture, virtual reality computer gaming engines and interfaces. This early work and their more recent *MAN A* series (2014 –2015) provide provocations for the audience to consider what is happening in various uses of media-technology. This is because the work explores real-time and virtual reality that can disturb an otherwise stable relationship with the audience. Gibson's interest in exploring instability in the frame for audiences through constructing engagements between dance and new technologies has a synergy with my research in experiments *No.25* and *No.26*.

The experiments discussed in this chapter probe the audience's ability to interrogate the screen's edges and space. I consider the ways in which screen technologies can immerse the viewer and look to find nuances in how audiences read media technologies. I also question the difference between my experiments and those in Gibson/Martelli's VR *MAN A* series. To this end, I asked Ruth Gibson where the edge of the frame was in her experience of using the virtual reality headset. I was interested in whether such headsets make the frame appear less malleable than *Experiment No.25's* multiscreen environment*,* and whether the audience can explore the spaces between and across screens. For Gibson, the experience of virtual reality was a paradigm shift. As she said, 'it's immediately super different because the frame is on your face' (Gibson 2019). This suggests the viewer cannot use their own depth perception to place the frame in the world. In my experience there are no seams or space between frames through which one can enter a virtual world. Perhaps this is why I found the virtual headset experience overwhelming and overly prescriptive and therefore less egalitarian than the hands on gestural system created in experiments *No.25A, B* and *C* (page 59). However, it seems clear that although my multiscreen environment is different to a virtual reality headset there is nonetheless a commonality between the two. Both screen technologies create state of art gateways for new dance experiences.

In *Envisioning Dance* (2002) Judy Mitoma traces one hundred years of film's and video's impact on dance and shows how twentieth-century media technologies have changed dance. As she says, they have and are producing 'entirely new forms of dance, created when director and choreographer go beyond the constraints of the body and find new ways to capture human motion' (Mitoma 2002: xxxi). My practice-led research with multiscreen technologies also traces shifts in new media experimentation. For example, experiments *No.25A, B* and *C Drumming* and *No.26 Jumping* (page 59) explore screen space as a porous and volatile space for a melding or mingling of the body with physical and non-physical space. The bespoke screen placements, together with software and hardware configurations, enmeshes screen space with the visitor *as* dance. The experiments also explore how dance content activated in a media system can provide a complex medium to frame and deepen an understanding of how screen spaces open broader cultural relationships, for instance between public and private gestures and between cause and effect in media technologies. For the visitor, they create a choreographic entanglement between screen and dance and, in line with the work of Gibson/ Martelli, work to synthesise elements as an immersive experience. The experiments used; *No. 16B* and *C Manipulated Fragments,* No. 20, No. 20A *Paper Smashing, No. 19B The Frame as a Sculptor* and No*. 24 EFX Camera vs Post Production,* also offer a depth of attention to experimentation with the frame.

1.4 CONCLUSION CHAPTER ONE

In this chapter I explored how the cinematic frame can craft dance and the filmic moving image. By selecting histories and nuances of the cinematic frame I showed how an evolution of frame technologies develops the notion of a hybrid frame that combines the proscenium and cinematic frame. I described three examples of multiscreen explorations that contributed to interaction in the seams, between and across screens using the works of Méliès and Svoboda and through an evaluation of a number of my own cinematic experiments. I drew a third comparison between my experiments and selected contemporary artists and innovative research projects in the field of dance's ontology with media technologies.

The experiments discussed in this chapter also delved into the complexities and intricacies of screen space. I considered the relevance of the cinematic frame's parameters, such as 'on' screen and 'off' screen, in camera and postproduction aesthetics, and in compositions of screens and how they contribute to choreographic phrasing. In the experiments I observed the potential of dance partnering with the void, and the edge of frame. I moved on to study the real-time engagement of the viewer with the screens and multiscreen technologies. I explored the movement in, between and across screens as well as the compositional architecture created through screen arrangements and screen mappings (the way images are digitally arranged on screens). My observation was that when there are two screens, a multiple or a mix of virtual and physical screens, the screen can be thought of as an interactive field. Two or more screens become an expanded architecture of gateways that invite the viewer to form connections and perhaps not see what shapes there are, but what is happening on the edge, across or between them. The experiments demonstrate many ways by which visual phenomena can be created between moving images as they interact with the cinematic frame and screen spaces.

These experiments are not endings in themselves but rather a beginning of an articulation that is working towards the accumulation of knowledge from iterative methods of experimentation. The first experiments (*No. 19 C The Frame as a Sculptor, No. 11A Theatre and Cinema Frames Overlaid, No. 13 Studies in*

Framing the Frame, (page 38) *No. 2 Zooming*, *No. 5A,C* and *D The Void, No. 9 Inside the Frame, No. 14 Studies in Framing, No. 15A and B The Camera Moves,* and *No. 17B Digital Duet* (page 44*)*) explored the hybrid frame, and then action within action within, the void and on the edge of frame. The second wave of experiments (*No. 7 Perspective, No. 28B Split Screen* (page 55*) No. 25 A, B* and *C Drumming* and *No. 26 Jumping* (page 59), revealed the ways in which the void, the edge of frame and screen's *setups* contribute to the creation of movement and space in the seams, between and across screens. The experiments provoke ideas of how visual media technologies can come together as sites for dance. Experiments *No. 25 A, B* and *C* and *No. 26* also through an interactive installation, come together *as* dance for the public to experience.

CHAPTER TWO

THE MATRIX: Camera image (material), the projector (reproduction) and the screen (appearance)

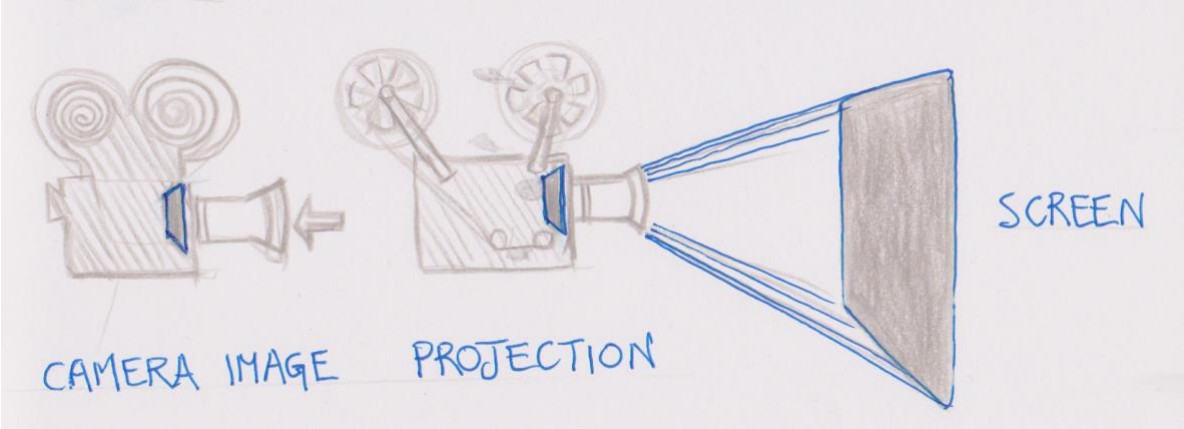


Figure 16: Camera image, projection and screen. Image Medlin B. (2019)

2. DEVELOPING MY AESTHETIC

In this chapter I trace and consolidate the aesthetic inquiry in my experiments through their relationship to aspects of avant-garde cinema and electronic art in the 1960s and 1970s.

Video portapacks were first introduced in 1967 and they freed artists from the confines of commercial television's rendition of space and time and the costs associated with cinema production. This freedom transformed a generation of artists. Nancy Holt commenting on the first time she used a portapack in 1969 when Peter Campus rented a video camera and came over said:

> [She said] There was a tremendous sense of discovery because it was so accessible and so Bob [Smithson] and I immediately did a work of art. We invited a large group of people over to our loft that night... It was very unusual [to] discover a medium, make a work of art and show it in the same day. That broke the ice and gave me a sense of what it was about - what were film ideas and what were video ideas. (Video Data Bank Holt N. n.d.)

Fast forward to the mid-1970s, I was the next generation when at the age of thirteen I undertook a community video portapack workshop using three-quarter-

inch format. I took for granted Nancy Holt's sense of excitement at the immediacy of the video portapack, never feeling the same sense of liberation. A few years later, I started to work with a super eight film camera. I was attracted to the finiteness of the photographic process, the image as light and the alchemy of film. After a few years of learning on the job I attended art school and drama school, and by the late 1980s I was hanging around the Film Anthology Archives in New York. In the early 1990s, I joined the London Film-Makers Co-op (Co-op) where I followed in the footsteps of the 1960s and 1970s avant-garde filmmakers. The Co-op had a wet darkroom, an optical camera and printing machines. It also had an exhibition space and a cinema that provided a social and critical context for questioning what writer and film theorist Peter Gidal terms 'the *apparatus* of experimental film' (1980: 155). While working at the Co-op I became interested in the knowledge that 'could be gained by one person working with a machine' (Gidal 1980: 152). I was able to explore an image through its reproduction, a knowledge I continued to accumulate in order to synthesis dance and computer-generated images throughout the 1990s. My new media art practice during this process was an aesthetic synthesises of earlier expanded cinema experimentation and was fundamentally influenced by the experimentation of the 1960s and 1970s avant-garde. My practice from these early years until now continues to be an exploration in the interweaving of multi-media machines and images covering cinematic, video and electronic technologies within the domain of movement research. The experimentation discussed in this thesis has evolved into a matrix of my practice in this field that demonstrates a lifetime accumulation of influences and an interweaving of ways of working with multi-media. I present the matrix at the end of this chapter (page 98). The works discussed in Chapter Two by the 1960s and 1970s avant-garde artists are intended to demonstrate how their histories of practice informed my understanding of these matrix terms. The matrix is also useful for elucidating my research as a new kind of mapping, and theorising of a practice-led approach to experimentation.

2.1 The Influence Of The Expanded Cinema Movement

The influence of the expanded cinema movement and associated avant-garde movements coerced cinema off the screen and into the world. Critically, artists of this period explored the reproduction of the cinematic image through its materiality and associated phenomena. They explored ideas of time, space and perception through what Sheldon Renan calls ‘a new, radically heterogeneous cinema in [an] onslaught of new image-making and practices: video, television, computer graphics, multi-media, theatre light shows and so on’ (1967: 227).[32] Experimentation in the expanded cinema movement also produced ‘a new age, a new way of seeing' in contrast to the existing cinema industry with large distribution networks (Rees 2011: 25).[33] These artists broke away from the single screen and created cinema as an event, inserting a new time and space into cinema through live performance, installations and other happenings. Their cinema was in flux, no more a passive activity where the audience sat in the auditorium and focused on light appearing as an image on a screen in front of them. Of this period, Rees notes that the avant-garde cinema artists' explorations with the analogue and electronic moving images, and the ‘sheer level of artistic discovery of ideas [were] more important than their fine tuning' (2011: 78). This period can also be viewed as a transitional one where artists from other disciplines turned their attention to media art as a means of generating social change and going beyond and against boundaries. Jonathon Walley, a scholar of the cinematic avant-garde, notes how ‘scores of painters, sculptors, and performers made films’ and subsequently challenged the form (2003: 27).[34]

The artistic dialogue of the time rejected binaries such as live and recorded. Often works showed pre-recorded film and video alongside shadows, live bodies and live video. This re-appropriation of the screen, as a spatial intervention, was part of avant-garde cinema’s ‘attention to film as a material construction’ (Rees 2011:

[32] Sheldon Renan is a writer and film scholar with additional interest in American underground film..
[33] Alan Leonard Rees (A.L. Rees) is a film scholar who advised the British Film Institute and Tate Britain amongst others on the history of experimental film and video.
[34] Jonathon Walley is a scholar of the cinematic avant-garde. His research focuses on avant-garde and experimental film and he has written extensively on the theme of ‘expanded cinema’, which he describes as ‘works that alter or abandon the familiar materials, forms, and spaces of conventional filmmaking’ (Walley 2020).

6/7). New practices and locations were found between the camera image, projection and the screen. Works such as Guy Sherwin's *Paper Landscape* (1975), *Man with the Mirror* (1976), and Malcolm Le Grice's *Horror Film* (1971) moved outside of cinema architecture and explored the body in motion through mixing the live with projection. In the performance *Paper Landscape*, Sherwin paints white the transparent screen onto which the film is projected, thus causing the projection to become visible. And for the performance of *Man with the Mirror* (1976), Sherwin filmed his interactions with a mirror. In turn, he used this film to accompany his live performance with the same mirror where his gestures also mirror the film. The performance appears as a kaleidoscope of various notions of presence. In *Horror Film* (1971), Le Grice stands between three projectors each projecting a primary colour in an arrangement of sharp and soft, which focuses onto one section of a wall. In each 'live film', Le Grice's movement in the light creates a new film of this movement. He says of the work, 'I interrupt the beam with a series of formal actions creating a complex set of coloured shadows' (Luxonline Le Grice 1972). Le Grice was not just interested in films that took place inside the frame, he was also involved in the phenomenon of the presence, of the performance and how it came into the space. Both Sherwin and Le Grice inserted themselves into the films, transforming the film as part of a live movement score. Contrast this with media artist and theorist Peter Weibel who says his experimentation was inspired by his reading of Willard Quine's philosophical book on ontological relativity and Quine's sentence '"to be is just a value of a variable" or a change of a variable' (Quine, cited in Weibel 2011: 119). This inspired Weibel to let go of classical cinema and adjust variables such as the projector, which no longer needed to point at the screen, due to its mobility. This new approach was instrumental in dismissing the formalist and realist divide between cinema as a technology and cinema as an exploration of the real world. Rather than exploring these traditional or binary concepts as separate entities, artists began to experiment. For example, they worked with and without a recorded filmstrip to produce a multiple of image representations through live events. The medium was deconstructed as they sort to discover its qualities, vulnerabilities and temporalities.

In the English-speaking world many of these artists circulated around the London Filmmakers Co-op, the Film Anthology Archives and the Judson Church in New York. In these venues they created an ephemeral cinema that was often presented for only one or two-nights. Therefore, like dance performances, there is less documentation and what is left is mere fragments such as word of mouth, photographs, scores and catalogues. However, unlike dance, there does remain original media elements such as films and objects that can be used in re-enactments. The magnitude of the transformation of cinema in the 1960s and 1970s is underpinned by the fact it was not since cinema in '1920s Europe [that] …film figured so importantly in the activities of the avant-garde' (Walley 2003: 27).

The legacies from the 1960s and 1970s are present in many of today's cultural spaces such as the Kitchen in New York and the Tanks in the Tate Modern in London. These early independent movements created local communities and works that were distributed only through small networks. As noted by Peter Gidal, these communities created a diverse 'spontaneous, untheorised practice of film … [which only] later became analysed' (1980: 152). A.L. Rees, writing on the cinematic avant-garde, says these cinema movements included concrete, structuralist, 'non-narrative, underground, expanded, [and] abstract' movements marked by 'inherent differences and even conflicts' within the avant-garde (2011: 3). My interest is not with these conflicts, but rather with the artists who explored their work as experiments in such a way where I can call on their work to intertwine notions of human dance with non-human dance to produce a dance of the cinema apparatus and visual materials. Through these groups I found precedents to establish and articulate how my own expanded cinema practice simultaneously dissects and entangles the camera image as a material, projection as a reproduction and the screen through notions of appearance. Furthermore, within this dissection of the cinematic frame, I am able to map-out a cinematic vocabulary that documents my aesthetics and conceptual interests.

This chapter draws on various sources to explore how the concerns of this period have informed my practice. I reference articles from this period that appear in journals such as *October* MIT Press, catalogue essays and websites hosting

films and documentation such as Luxonline and those dedicated to the legacy of Trisha Brown and Merce Cunningham. Another interesting source are conversations arising from curators who are now creating exhibitions, writing and editing books with artists from the 1960s and 1970s. The artists (many of them alive today) speak publicly of their practice although not of their theory. For example, Ken Jacobs a well-known American avant-garde filmmaker, spoke about expanded cinema in a group conversation and exhibition that celebrated the origins of and current state of the expanded cinema.[35] For Jacobs, unlike single-screen cinema, these art projects were made to explore ideas and to satisfy a specific community rather than a touring market. Andrew Lampert, filmmaker, writer, archivist and academic is another who spoke of trying to unfix cinema, claiming that documenting events cannot do service to the moment - that the ephemeral nature was part of the event objective. Barbara Hammer, a feminist and visual artist working with film and video, spoke of wanting to break the frame by taking film off the screen and into another space, one of them being feminism (Hammer B. Microscope Gallery 2016). Her 1970s films dealt with feminist issues such as gender roles, lesbian relationships and family. Although the majority of artists in this period were not primarily affiliated with or even discussed within dance, aspects of their experimentation are important because they underpin my practice and provide a critical and historical context to examine the relationship between dance and cinema.

Douglas Rosenberg in his most recent book points out that 'the screen has often proven to be a particularly apt site for dance, even more so in this contemporary form' (2016: 5). I reflected on Rosenberg's idea to investigate the history of the screen as a site for dance. In the remainder of this chapter my deconstruction of the cinematic apparatus into the camera image (material), projection (reproduction) and the screen (appearance) explores the legacy of experimentation around expanded cinema – a legacy that has not only influenced my work, but which I use to build the type of contemporary practice which Rosenberg speaks of. I focus on ten artists: Peter Campus, Valie Export, Hollis Frampton, Joan Jonas, Anthony McCall, Paul Sharits, Richard Serra, Trisha

[35] The conversation occurred at the Microscope Gallery, New York City, January 4, 2016.

Brown, Yvonne Rainer and Merce Cunningham. All these artists in their own way combined performance and film/video to create movement sculptures and were influential in evolving my aesthetic interest in the cinematic frame *as* dance. Through the camera image (material), projection (reproduction) and the screen (appearance) I, explore how these ten artists, questioned the boundaries of the image through concepts such as interrelationship, presence, absence, space, movement, duration, content and form. In response to these artists I explore how the cinematic frame constructs, generates, focuses, and is always insinuating what is intended as interesting.

2.2 THE CAMERA IMAGE (MATERIAL)

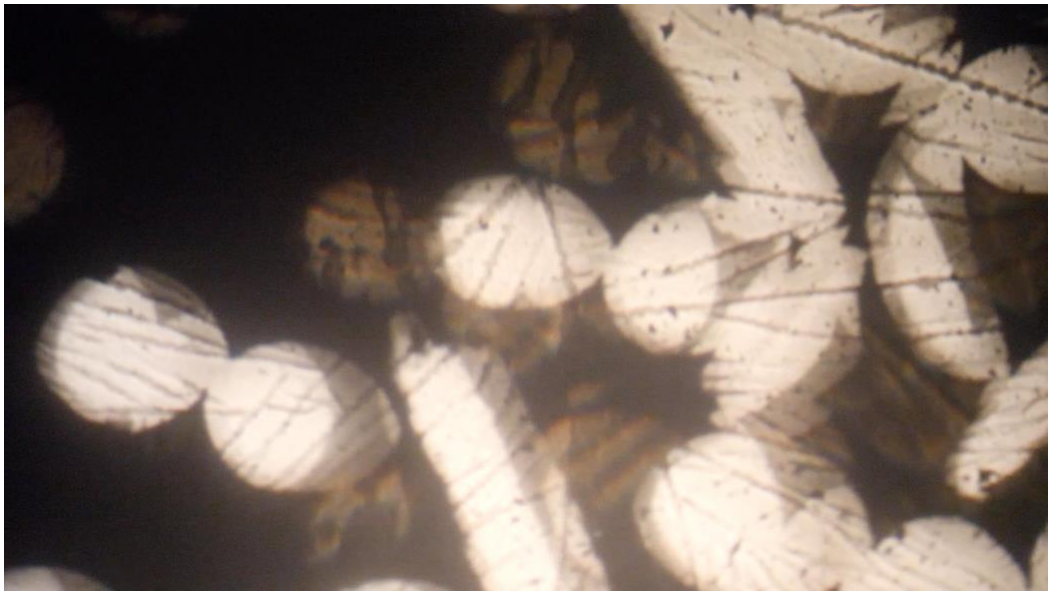


Figure 17: *Experiment No. 23A Handmade Emulsion* sliver gelatine image. Image Medlin M. (2017).

Experiment No. 23A Handmade Emulsion was created in 2017 when I was a member of the LaborBerlin film collective. It demonstrates camera-less cinema.[36] Working at LaborBerlin enabled me to inhabit the world of avant-garde cinema history, and to experiment with cinema as a pure material without the optics of a camera. I worked in the darkroom following recipes to mix Cyanotype, Van Dyke Brown, and Sliver Gelatine film emulsions. After letting the mixtures stand in the fridge overnight, they were painted on clear filmstrips and exposed to light or sunlight as required. The intention was to experience and understand the emergence of the cinematic image as an alchemy, a science and a material.

Experiment No. 3 Channing the Frame and Experiment *No. 23A Handmade Emulsion* reflect the theme of the camera image as a material. The reader is invited to view them online now and return to it as a point of reference while reading the chapter.

Vimeo URL: *Experiment No. 3 Channing the Frame* https://vimeo.com/288142639

[36] LaborBerlin is a member-based analogue film collective of which I was a member between 2015 and 2019. It has a similar ideology to the London Film-Makers Co-op before it was rebranded in 1999 as LUX which is a cinema, gallery and distributor without the photographic laboratory.

Vimeo URL: *Experiment No. 23A Handmade Emulsion*
https://vimeo.com/237041295

The camera image as a material is the first part in my deconstruction of the cinematic apparatus into three categories: the camera image (material), projection (reproduction) and the screen (appearance). As part of the first category the camera's optics are unravelled as a flexible device using the works of scholars such as Ralph Stephenson and Jean R Debrix who, in their book *Cinema as Art* (1965), suggest that 'a camera lens can abolish distance [and] can make objects as large or small as it likes. It can accentuate, abolish or distort perspective' (1966: 89).[37] Through its focus, the lens can give objects unique qualities such as soft edge distortions, or 'when there is enough light a wide-angle lens of short-focus can encompass a wide visual angle and can give a greater depth of field' thus making the camera image more lifelike (1966: 89). The inverse is also the case where 'a long-focus or a telephoto lens covers a small visual angle, [it] destroys relief by flattening the image' causing a foreshortening (1966: 89). Each of these examples contribute to a cinematic vocabulary and the camera's ability to create and transform images. It was common in the period of the 1960 and 1970s to see the camera lens not as an eye, but rather a mobile, tactile, malleable, and sometimes instantaneous media. What I explore in *Experiment No. 23A Handmade Emulsion* parallels similar explorations by avant-garde artists in the expanded cinema and structuralist movements, and in particular their rejection of the facilities of the lens. By this I mean, they often focused on new aesthetic explorations of the image as a material and thus extended the cinematic vocabulary, as I do in *Experiment No. 23A* where the camera lens was abandoned. Like these artists, it was not my intention to use the camera image to establish continuity between characters or locations, for example 'according to a set of rules that ensure that the second shot corresponds to the first shot' (Elsaesser and Hagener 2010: 91). I was also not abiding by the '180-degree' rule where 'within one scene the camera remains on one side of the action' because

[37] Ralph Stephenson worked at the British Film Institute in the1960s and he was 'interested in both cinema and other arts' and lectured and wrote 'widely on film subjects'. (Stephenson & Debrix 1965). Jean R Debrix produced and directed films in the 1960s and was in 'charge of the film section of the French Ministry of Cooperation' in the 1960s.. (Stephenson & Debrix 1965).

within a narrative film ‘any crossing of the line is perceived as disruptive or at least highly problematic’ (Elsaesser and Hagener 2010: 91).

My experiments with the camera image as material shift between threads of movement created by human bodies and non-human materials. The enmeshing of these threads are tested throughout the experiments and in this respect tread in the footsteps of the artists discussed below. The discussion examines how these artists play with the camera image as a material, with and without a lens, to explore the potential breadth of aesthetics offered by an expanded cinema approach. The artists discussed include: Trisha Brown, Merce Cunningham, Charles Atlas, Yvonne Rainer, Richard Serra and Valie Export. All are important in that they made performance, films and sculptures where the camera image is rendered visceral, tangible, effecting the body and the space around it. These artists blurred the boundaries between mediums and moved cinema into the sphere of art and performance. I discuss some of their work and key concerns as a means to contextualise particular interests that emerge from the experiments.

The following four experiments reflect themes discussed in 2.2 The *Camera Image (Material)*. They do not emulate the six artists or their works, but rather reflect a synergy in curiosity and approach to experimenting with aesthetics and conceptual ideas of manipulating movement with camera and editing technologies. The reader is invited to view these experiments online now and return to them as points of reference while reading the chapter.

Vimeo URL: *Experiment No. 16 Scale and Synchronisation*
https://vimeo.com/262852193
Vimeo URL: *Experiment No. 19D Hand-processing Workshop*
https://vimeo.com/313954719
Vimeo URL: *Experiment No. 22 Depth of Field* https://vimeo.com/314698203

2.2.1 Trisha Brown

A trio of choreographers in the 1960s and 1970s, Trisha Brown, Merce Cunningham and Yvonne Rainer, are known for their experimentation with the cinematic frame. Each of these choreographers is also synonymous with what became known as ‘postmodern dance’. They were pioneers of their time, and like the expanded cinema artists they explored their art form outside its traditional frames. For them, it was a paradigm shift that shed the need for the virtuosity of ballet and modern dance training replacing it instead with an interest in movement arising from the everyday body. In the mid-1960s, Trisha Brown's choreography included a series of gestures, personal 'rituals in which Brown posed the self as a dilemma, making identity vulnerable to disassembly' (Trisha Brown Company Goldberg 2015). One of the resulting performances was *Homemade* (1966), a solo performance that linked her work to the traditional characteristics of expanded cinema. Created in collaboration with film artist Robert Whitman, Brown performs with a super 8 projector. The projector was attached as an augmentation to her body to become part of a hybrid duet. Brown's performance destabilised the camera (material), projection (reproduction) and the screen (appearance), thus re-choreographing the static nature of the cinematic apparatus.

2.2.2 Merce Cunningham and Charles Atlas

Merce Cunningham's first videos were made for television between 1968 and the early 1970s. David Vaugh, who was archivist for Merce Cunningham, notes how these productions used studio models and 'dealt principally with movement within the frame, rather than movement of the frame – that is, they had mostly used a stationary camera and very little editing' (Vaughan 2002: 35).[38] For Cunningham, these works were about exploring the difference between the way the dancing body is framed by the proscenium stage, television and the cinematic frame. In this respect Cunningham was working directly with what I call the cinematic frame.

[38] David Vaugh was a dancer and choreographer working in modern dance and ballet. He was also a dance critic and historian and then the archivist for the Merce Cunningham Dance Company from 1976 – 2012.

Working with the single screen Merce Cunningham remakes camera space and presents it as a challenge:

> It has clear limits, but also gives opportunities of working with dance that are not available on the stage. The camera takes a fixed view, but it can be moved. There is the possibility of cutting to a second camera which can change the size of the dancer, which, to my eye also affects the time, rhythm of the movement. It can also show dance in a way not always possible on the stage; that is, the use of detail which in the broader context of theatre does not appear (Cunningham M 1994 quoted in Vaughan 2002: 36).

Cunningham's desire to experiment with framing the body through the camera and the medium of television can be seen throughout his accumulated works. His early work *Blue Studio: Five Segments* (1975), directed by Nam June Paik and produced for WNET/TV, is a good example. In this production there is a thirty-three-minute solo dance where Cunningham is 'chromakeyed', that is, superimposed using a blue screen in the cinematic frame and made to float across varied scenes. Cunningham appears to glide with the camera as it tracks along a downtown street in New York over block-coloured backgrounds of red, pink and blue in a composition of multiples of himself dancing as if along the seashore. Each of the five segments shows the full figure of Cunningham as if inert, yet he is mysteriously propelling himself through these terrains.

Cunningham followed this with a series of experiments in collaboration with Charles Atlas, still working with video, but now in Cunningham's studio *Westbeth*, in New York City. There they were free to explore and so broke away from the television studio models, exploring how technology helped to see movement differently. They fractured, dislocated and built new spaces with the screen. Although not listed as part of the expanded cinema movement, their explorations nevertheless explored the ontology of the screen. Examples of their work include *Fractions 1* (1977), a work 'for eight dancers played with the idea of fragmenting images among a number of screens' (Vaughan 2002: 36). Another is '*Locale* (1979) that investigated the possibilities of a moving camera' (Vaughan 2002: 35). Video enabled Atlas to record continuously, and like the original dance and

camera avant-garde choreographer Maya Deren, he used the camera in a way that its energy matched the dancers. He participated as if he was a dancer, filming not only the front but around and among the dancers. In *Torso* (1976), which was made 'to be shown on a double screen, one showing the whole stage and the other closer details', Atlas shows how the choreography and the frame worked together (Vaughan 2002: 36). The Merce Cunningham Trust website acknowledges that Cunningham in collaboration with Charles Atlas not only 'developed imaginative new ways to capture and present the medium of dance through the moving image,' but perused a 'new genre of dance expression that pushed 'practice in unexpended directions' (Merce Cunningham Trust 2020).

2.2.3 Yvonne Rainer And Richard Serra

A thought-provoking contemporary research article that focuses on the phenomena of the cinematic frame is by Kyle Bukhari, a New York based dance research scholar.[39] Published in the *International Journal of Screendance* (*IJSD*) Vol 8 (2017), Bukhari's text, *Movements of Media in Yvonne Rainer's Hand Movie (1966) and Richard Serra's Hand Catching Lead (1968),* is a comparative analysis of the framing in these two short films.

Rainer's and Serra's close-up hand films can be equally classified as screendance and sculpture. Bukhari's comparison of the two films articulates how the cinematic frame is responsible for the way movement is perceived. For example, Rainer's film has a central composition in a static frame that encapsulates a solo hand, as if it is a moving monument making non-virtuosic intimate gestures. Serra's close-up frame is also of a hand making a non-virtuosic gesture where the movement lasts only a few seconds and then repeats. Within the loop there is a lead object with its own inertia that passes vertically through the frame and connects the movement inside the frame to a phenomenon of movement outside the frame.[40] Rainer's and Serra's frames are alike, both static with a central composition. However as Bukhari identifies, there is a significant difference in the interaction between the

[39] Kyle Bukari is a dance scholar and has danced extensively for ballet companies in Europe..
[40] The connection between on screen and off screen has a cannon of theory which I discuss in Chapter One.

phenomenon of the movement and the framing that is not art-form based. To explore this difference Bukhari employs Gilles Deleuze's 'out-of-field' theory from his book the *Movement Image* (1986: 16-18). Deleuze determines an 'out-of-field' by the way a frame forms 'a large set which extends it, sometimes in the form of a whole into which it is integrated' (Deleuze 1986: 18).[41] For Deleuze,

> what is inside the frame can be thought of in two ways. Either as 1) a 'dynamic-physical' information system that in reality extends beyond the frame, or 2) a 'geometric' information system, in that its movements do not go beyond the frame, rather they emanate from it (Deleuze, cited in Bukhari 2017: 9).

Bukhari argues that the difference between these two systems is that they either define 'movement as … pre-existing the frame dynamically and physically', or as movement coming directly from the subject (Bukhari 2017: 10). The selection of the two films demonstrates the difference. In the case of Serra's film, the movement demonstrates a 'dynamic-physical' movement extending beyond the frame. In the case of Rainer's *Hand Film,* the movement is 'geometric' as it does not go beyond the frame, rather what we see is the movement emanating from the hand. Bukhari points to two ways the frame can co-represent dance. His analysis imbues the frame as a catalyst that constructs the viewer's perception of both hand movements. In both films, movement acquires additional qualities choreographed by the combination of the elements in the frame and the frame itself. What these two films demonstrate is how the cinematic frame enables the viewer to perceive additional movements, produced by framing, that they would not be drawn to in a live performance. Bukhari's research demonstrates how the frame significantly diversifies potential readings of moving images.

[41] Deleuze's out-of-field theory is also adopted by Michael Tawa to consider the artificiality of a framing system in choosing all kinds of parts 'which become part of a set' (Tawa 2011:100). There is a related discussion of the totality of images in Chapter Three in Slippage Six (page 129).

2.2.4 Valie Export

Valie Export is a well know Austrian media and performance artist whose work spans from the 1960s to the present-day. Her work, *Space Seeing/Space Hearing* (1973/74), is an example of an artist using the camera image as a sculptural material. In her artwork she creates multiple framings of herself to explore perceptions of space through sound. The work is a real-time hybridisation of space, movement, duration and sound. As a performance, Export stands still in a room. There are four fixed camera perspectives of her as the subject, a wide shot, mid shot, headshot and a closeup. The four camera perspectives are used to animate a performance from her motionless body. There is a white background, emphasising a two-dimensional view. A video synthesiser score sequences the four image frames in six sections - space position, partitioned images, space position-composition, partitioned images-composition body, and body-composition. Export says the score is ‘presented in a geometrical, visual way’ where the music is coupled with space (New Media-Art Girin 2019). Technically, a sound score triggers a video synthesiser resulting in scored animation of still frames. The score continually mobilises her static body in split screens to change its relationship to itself and the space. Girin states that the music and sculptor create a melody which ‘is supposed to help the spectators experience a sense of movement with just the combination of sound and images’ (New Media-Art Girin 2019).

Figure 18: *Space Seeing/Space Hearing*, by artist Valie Export (1973/74). Stills from video installation. Image collage Medlin M. (2018).

In my reading, the durationally scored shifts of camera perspectives in tandem with multiple media renders Export's body transformations *as* dance as the rigid framing of the body is integral to re-configuring the performance for the screen. Moreover, Export's minimalist and conventional cinematic partitioning of the body generates a non-virtuosic experience of dance. In other words, this is a dance of a still body being moved in space by media technology. Although distinct from each other, Export's performance and the cinematic frame are both mediums where the human body is the dominant subject. Interestingly for my notion of the camera image as material, Export's performance comments on film and television

production where the proportions of framings are defined in relation to the human body. Here the human body becomes a material object. For example, standard industry references propose a set of points that frame and partition the body. A close-up shot frames the head and shoulders of the subject, the medium shot frames a person above or below the knees, while a long shot frames a full figure. In *The Cinema as Art* (1965), Ralph Stephenson and Jean R. Debrix write that the human mind is flexible and intuitive, while the camera lens is rigid like the mechanics of the retina. I imagine Export is using her score and technology to play with this idea. Stephenson and Debrix explain the difference between a theory of human perception and the camera saying:

> Mathematically, the size of objects in nature decreases in proportion to the square of the distance away from us. Thus, as far as the image on the retina of ours is concerned, a man twenty-feet away from us appears four times smaller than ten feet away, while a man forty feet away appears sixteen times smaller. But, as modern psychologists[42] have demonstrated, we instinctively correct the message we receive from our optic nerve, so that differences in proportion registered on our retina are mentally reduced. If we accept the immediate reaction of our eyes, a natural perspective would be much more exaggerated (Stephenson and Debrxi 1965: 44/45).

In this citation, Stephenson and Debrxi elucidate their proposal that human perception operates within a ‘system of references which makes everything a ‘reasonable size’ [thus highlighting] that our minds ‘see’ things differently from our eye’ (Stephenson, Debrxi 1965: 44/45). Their proposition is non-genre specific. They note that this difference in our perception is because 'the cinema presents a special world external to us and outside our extraordinary experience' (1965: 44-45). Stephenson and Debrxi’s proposal suggests that experimental media practices, such as Export’s *Space Seeing/Space Hearing* which is seen in everyday life outside of the cinema, might add perceptual complexities to a reading of human proportions and variations. In reference to Export’s work, I find their proposition thought-provoking because it creates a conundrum between technology and cognition. In reviewing Export’s work, Stephenson and Debrxi

[42] See R. H. Thouless, *General and Social Psychology*, University Tutorial Press, 1945.

provide a space to contemplate the interplay between an optical, instinctual repositioning and a measured framing of the body. My experiments *No. 16 Scale and Synchronisation, No. 19D Hand-processing Workshop* and *No. 22 Depth of Field* (page 77)*,* compare these measured fixed framings of a dancing body with a dance that changes proportions.

Returning to my two questions in the introduction (page 11), I feel each of the works discussed above addresses these two questions. They demonstrate the replication of the cinematic frame *as* dance and also the ways in which the cinematic frame *as* dance can (re)frame cinema as a multiscreen medium. While these works do not always specifically address dance, for instance Export's main aim is to try and make a score from sound and image, her work nonetheless examines human movement created by media. She uses the human body like building blocks reassembling them in space. All the works discussed above are pertinent to both questions because they create dance between the multiplicity of media. Moreover, they elucidate the cinematic camera image as a material to be manipulated through an exploration of spatial parameters. These works provide a precedent for my exploration.

2.3 PROJECTION (REPRODUCTION)

In the 1960s and 1970s film projectors became instruments and artists worked with them to discover new spatial and transformational dimensions of the cinematic frame. An array of artists working in this period formed small and large orchestras of projectors with which they experimented to create new ephemeral architectures. As Tom Gunning tells us, these artists dynamically stimulated the potential of the cinematic image by 'throwing forward, in this case light, but also shadow, with a collision occurring between light, shadow, surface or screen' (2009: 23). This transformation was not through the camera's optics or movement in the cinematic frame, but rather created by the projection of light.

2.3.1 Anthony McCall

In *Light Describing A Cone* (1973) Anthony McCall's expanded cinema work explores the parameters of projection. Described as a solid light film, the viewer enters an immersive space made of light. According to curator Chrissie Iles, *Light Describing A Cone* was 'a film [which] is projected onto the wall of the darkened room' (2001: 45-46). Over thirty minutes a slim pencil of light is slowly emitted from the projector. The line of light becomes an atmosphere as it illuminates particles in the air and fills the space with the appearance of a three-dimensional shape depicting a large cone. This cone of light hovers in space between the light source and the screen. Finally, the projection appears as a circle drawn on a distant screen. Giuliana Bruno describes the work as projecting a ''dancing cone', [that] slowly and irresistibly, makes you sense the materiality of filmic light' (2014: 69).[43] She also sees the work as engaging the viewer both architecturally and sculpturally in haptic ways. On this point, I agree with Bruno that it is 'made to be experienced as a solid form' (Bruno 2014: 69), yet it is the movement of light particles through space that transfigures the notion of projection as a virtual surface that can turn into a place as it becomes a site for the viewer's engagement. For McCall, the work is part of a solid light series where light and time form the bedrock of cinema and at the same time subvert the notion of the

[43] Giuliana Bruno is a scholar and curator renowned for her exploration of the intersections between visual arts, architecture, film, and media.

cinematic image (Walley 2003: 20). As McCall says, he intends 'to concentrate less on the physical process of production and more on the presuppositions behind film as an art activity' (Anthony McCall quoted in Walley 2007: 252/254). The movement of light through space challenges the notion of a static projection and the fixed screen by creating an experience of being inside the image. Through McCall's work I see projection as a calculated approach to an ephemeral unfolding of space.

2.3.2 Paul Sharits

North American artist Paul Sharits' deconstruction of the 16 mm film projection is similar to MaCall's in that they both highlight projection (reproduction) as the cinema apparatus producing new movement in space. In *Synchronoussoundtracks* (1974), Sharits uses a hands-on approach to the filmstrip, a technique 'filmmakers most commonly connect to structural film' (Walley 2003: 27). In an installation, *Art Expanded, 1958-1978* (2014), presented at the Walker Art Centre in Minneapolis, Sharits pulled the projector apart and in a rather determined way 'began committing a kind of violence against the film projector' (Walley 2003: 19). Walley takes up this point in an article in *October* magazine (2003) where he details Sharits's dissection of the projector saying he 'removed the shutter-blade and registration pin. The result was the film being projected was no longer experienced as a series of discrete frames bound by the movement of the shutter blade and registration pin, but a blur of colors and shapes' (Walley 2003: 19). Sharits's film was similar to his earlier process of creating flicker films whereby the filmstrip is cut into individual frames and then reassembled like an animation, frame by frame. Sharits's act of dissecting the projector's standard interrelationship between time and motion distorts the reproduction of the images. It can also be read as a 'step in a larger process of locating the cinematic outside of film' (Walley 2003: 19). My interest in Sharits's work *as* dance lies in the discrepancies in the movement qualities he constructs. These discrepancies can be seen in two ways; first, when viewing the actual movement of the filmstrip through the projector, and second, on the screen through the re-registration of projector movement. Sharits's cinematic time and space contribute to an appreciation of what is a non-human dance.

The philosophy of McCall and Sharits was to take cinema outside of the frame and the conventional rectangular screen to create new ontologies for the screen. For me, their processes grapple with ambiguous statements about the cinematic image also found in the work of Michael Tawa. For Tawa, cinema 'is not 'on' the wall or 'in' the space of projection'. Nor does the screen image 'depict or represent an idea' (Tawa 2010: 30), but is, as Jean-Luc Nancy says, 'itself the idea' (Nancy 2001: 46). Sharits's rephrasing of the image as a by-product of a dissection of the projector, and McCall's inversion of the architecture of the screen, are new ideas for projector function. Sharits and McCall conceptually address cinema as movement and space created through the projection of the light on to a surface. By exploring various expanded cinema projection modes I am also exploring cinematic architectures such as in *Experiment No.1 The Frame* (page 24) *Experiment No.7 Perspective* (page 55), *Experiment No.8B Interference*, (page 94) and experiments *No.10 Layering, No.15E Le Corbusier, No.19A Analogue Optical Effects, No.19E* and *No.19F The Frame as a Sculpture,* below . Sharits' and McCall's works demonstrate the same breadth of spaces between the projection machine (reproduction), the camera image (material) and the screen (appearance), that I have interrogated.

The following five experiments reflect the theme of projection (reproduction) explored above. They do not emulate the works of Anthony McCall or Paul Sharits, but rather reflect a synergy in curiosity and approach to experimenting with the enmeshing of machines, images and the space of projection. The reader is invited to view these experiments online now and return to them as points of reference while reading the chapter.

Vimeo URL: *Experiment No.10 Layering* https://vimeo.com/288141288
Vimeo URL: *Experiment No. 15E Le Corbusier https://vimeo.com/411678022*
Vimeo URL: *Experiment No. 19A Analogue Optical Effects* https://vimeo.com/313954108
Vimeo URL: *Experiment No. 19E The Frame as a Sculpture* https://vimeo.com/316686955
Vimeo URL: *Experiment No. 19F The Frame as a Sculpture* https://vimeo.com/406781926

2.4 SCREEN (APPEARANCE)

Figure 19: *Experiment No.8B Interference*. Image Medlin M. (2017).

2.4.1 Hollis Frampton

Hollis Frampton is an American filmmaker who performed his *A Lecture* at Hunter College in New York City in 1968.[44] In his lecture performance, Frampton synchronises a 16 millimetre film with an audio pre-recording of the script read by experimental filmmaker Michael Snow. While the film and audio-track are playing Frampton follows them as a score. The score uses pieces of red cellophane and a pipe cleaner to demonstrate the function of the projector. He shows, amongst other things, how projecting a 24th of a second constructs a viewer's perception of cinematic frames in sequence. As Frampton says:

> The projector accelerates the small pictures into movement. The single pictures, or frames, are invisible… nothing that happens on any one of them will strike our eye.

[44] The script is published by The Criterion Collection along with instructions so you can re-enact the performance.

> And this is true, so long as all the frames are essentially similar. But if we punch a hole in only one frame of our film, we will surely see it.
>
> And if we put together many dissimilar frames, we will just as surely see all of them separately (Frampton cited Jenkins 2009: 128).

What I find exciting about Frampton's *A Lecture* is how he is able to playfully demonstrate the contradictions of the appearance of singularity, that is, the 'confined space' of the cinematic frame, verses a mass of images in sequence. Frampton shows how experimentation with a single cinematic frame can break the spectator's passive engagement with the illusion of a motion sequence.[45] And he shows this through a hybrid experimental practice (film, performance, and theory) that celebrates each cinematic frame as having value.

[45] It is worth noting that in Alva Noë's book *Action in Perception* (2006) Noë makes the case that the notion of the retina (and mind) being passive receivers of information that 'decodes' or 'projects' is fundamentally flawed. As he asserts, there is nothing passive about perception. Noë's more contemporary philosophical position on ways of understanding this phenomenon of perceived movement is beyond the terms of my research into the experiments and discoveries of the 1960s and 1970s.

Figure 20: *Experiment No. 23 Making Motion*. Image Medlin M. (2019).

The following experiment explores the theme of the appearance of the single image in a sequence. The reader is invited to view this experiment online now and return to it as a point of reference as needed.

Vimeo URL: *Experiment No. 23 Making Motion*: https://vimeo.com/310274218

Experiment No.23 Making Motion explores the viewer's experience of the individual frame in a sequence of cinematic frames similar to what Frampton does in *A Lecture* (1968). The experiment shows a curiosity with the photographic printing process in making motion by exploring how a series of approximately eight to twelve frames in sixteen-millimetre filmstrips interact with the function of projection technology. To create the experiment I used a photographic contact printer to print the short filmstrips. This was a camera-less based technique. I

exposed sixteen-millimetre high-contrast filmstrips, which I hand developed and telecined (computer transfer from the film to a digital file). The images bear a resemblance to Hans Richter's *Rhythm 23* (1923). Each short filmstrip in *Experiment No. 23* acts like the punched holed frame we see in Frampton's *A Lecture*. Together, as a sequence of unique camera-less frames they move as a contrast of light and dark. Like Frampton's and Sharits's works, the experiment explores the emergence of abstract movement. It looks at what appears through the combination of the cinematic frame's materiality and its apparatus. That is, the contrast of light and dark of the chemical alchemy projected forward and reproduced by the light and the mechanics of the projector. Frampton's work with the macro and micro interplay of material, apparatus and the ephemeral resonate with my own enthusiasm for discovery in perceptual and sensorial experiences. This resonance is also an example of how my cinematic experimental research extends notions of expanded cinema and structuralist film movements into the field of dance studies.

2.4.2 Joan Jonas

In 2018, whilst in the early stages of my experiments, I had the opportunity to see Joan Jonas's retrospective at the Tate Modern in London. The exhibition included works and interviews that covered five decades of her interdisciplinary practice. I found her early works, *Vertical Roll* (1972) and *Organic Honey's Visual Telephathy* (1973), of particular interest because of their performative use of live video. As discussed below, Jonas and Peter Campus and perhaps more famously Korean artist Nam June Paik radically redefine video's purpose. In Jonas's video *Vertical Roll* (1972), she explores how to effect, or perhaps sabotage, the video signal. In one segment we see how an electronic roll bar that would usually stabilise the video field (horizontal hold) continually rotates through the image. The edge no longer distinguishes one frame from the other. Instead, Jonas combines the electronic fields and the frame's edge to create a rupture that blurs the boundaries between frames. What we see are video frames being merged to choreograph legs, faces, hands and bodily movements through a disturbance of the technology. We see the video frame's edge disturbing and animating the movement of a pair of legs moving directly forward towards the camera. Through manipulation of the

roll bar, Jonas is able to explore the instability of the electronic media signal. Her interference with the technology disrupts the signal, producing a technical glitch, which could be interpreted as a destabilised moment in time – commonly thought of as a distortion. It can equally be described as the appearance of a new grammar for the synthetic video image. In *Vertical Roll*, it is the technical vulnerability and instability of the frame that causes the effect of choreographing the movement of the fragmented body opening up the types of spaces between and across screens as discussed in Chapter One.

2.4.3 Peter Campus

Peter Campus is a North American new media artist who initially trained as an experimental psychologist, and his interest in psychology influenced his art. He started exhibiting video art in the early 1970s. Campus's *Three Transitions* (1973), which was created prior to Merce Cunningham's and Nam June Paik's *Blue Studio: Five Segments,* used video chromakey to conjure a psychological experience.[46] *Three Transitions* is a seminal work, it is literally three transitions where Campus alters his persona. In the first transition Campus stands facing a paper wall which is sandwiched between two cameras that are pointed at each other with matching framing. Using a video effect/hardware we see the two images overlaid. Campus appears to cut through himself with a knife then climbs though himself. It is presented in a very dry manner, but it is a bizarre and eerie transition and reminds me of Luis Buñuel slicing of the eye in *Un Chien Andalou* (1929), or entering the mirror in Cocteau's film *Orpheus* (1950). In transition number two, Campus harnesses video chromakey technology by painting his face to reconfigure himself. As he subtracts himself from one video layer, he appears within his own face as if he was a mirror. In the third transition, again using the metaphor of the mirror, he holds a chromakey paper which he looks into and burns, and as the mirror burns, he disappears.

Campus's use of video synthesis draws attention to the reconfiguration of the images as well and the reconfiguration of the materiality of his body and gestures.

[46] *Three Transitions* (1973) is held by LIMA, a platform for media art, new technologies and digital culture, in the Netherlands, and in the collection at the Museum of Modern Art in New York.

In the various synthesised images of himself he appears to be liquid as if melting the inner and outer selves into one. Prevalent in many of Campus's works, for example *Interface* (1972) and *Door* (1975), is the theme of human perception and cognition where he uses real-time video as an aesthetic medium to explore with the viewer. Likewise, he uses real-time video to explore the construction of identity and the duality of illusion and reality. Maureen Turim refers to Campus as breaking boundaries, 'creating a space for intersubjective activity in the margins of the commercial structures that dominate mass culture and other artistic practices' (1980: 145).[47] Like the others I discussed, Campus was instrumental in creating new cultural platforms for expression. Film scholars Thomas Elsaesser and Malte Hagener termed it the creation of a new quasi imagistic space –the act of 'displaying something [or] making something visible' (2010: 38). Campus's work with chromakey is an example of how the frame of electronic media creates a new place for the body and gesture in visual art. It is also this same technology which is employed in the work of Cunningham and Nam June Paik to extend the space for dance.

The following two experiments resonate with the theme of what might appear through the screen explored above. The reader is invited to view these experiments online now and return to them as points of reference as needed.

Vimeo URL: *Experiment No. 6 Analogue and Digital*
https://vimeo.com/447336799
Vimeo URL: *Experiment No. 8B Interference* https://vimeo.com/447360634

In these experiments, like Frampton, Jonas and Campus, I am interested in what appears through technology and how to work with it and extend the aesthetics or glitches it produces. In the process of *Experiment No. 6 Analogue and Digital* I trialled ways to alternate the rhythms of analogue technology with the rhythm of the dance and the digital rhythms of divisions in screen space. In *Experiment No. 8B Interference,* I produced a glitching electronic signal by overlaying two video

[47] Maureen Turim is a Professor of English at the University of Florida. Much of her writing and teaching is on cinema, such as Women in Cinema and Films on Godard.

projectors. Like Jonas and Campus, I explore how live and hacked video can extend the presence of the body in the image. As shown by Campus, Jonas and Frampton – and through my own experiments –there are many ways to explore with the cinema apparatus, like the first examples of early cinema machines such as the flipbook, Zoetrope and Praxinoscope, which are used to invoke motion. However, in the 1960s and 1970s the artists I have discussed above experimented with contrasting and combining analogue and electronic mediums to do more than create entertainment systems. Their desire was to 'systemically experiment with and 'open up'' media already industrialised by television' (Manovich 2013: 92). They placed themselves in the machine, similar to the experience with video described by Rosalind Kraus as placing the body 'between two machines… which re-projects the performer's image with the immediacy of a mirror' (1978: 43).[48]

[48] Rosalind Kraus is an art theorist and critic. She was the associate editor of *Artform* from 1971 to 1974 and has edited *October.*

2.5 CONCLUSION CHAPTER TWO

The artists from the 1960s and 1970s do not conform to spatiotemporal structures in their artworks. Their practices critically and culturally engage with an exploration of perception in time and space through aesthetics, conceptual ideas and media technologies. I compare their processes to my own research and experimentation, which sees experimental artworks as by-products of process. Their move to cinema is best known for deconstructing the illusion of the apparatus rather than the literal power of cinema to magnify the real. What these filmmakers and artists-turned-filmmakers 'had in common was that they all tested, explored, and otherwise experimented … putting the medium through its paces, so to speak' (Walley 2003: 27). In the same way my work questions the borders between dance and cinema, these artists were not interested in the distinctions of 'film theories of the period such as is this film/not-film/not-yet-film/no-longer-film' (Elsaesser and Hagener 2010: 37). In fact, the movement vocabularies developed within this experimental cinema subverted the dominance of the spoken word and sought alternative ways of drawing new meanings out of a performer's body in tandem with the new aesthetics they were creating with the moving image. In this way their work cannot be compared to commercial genres such as narrative, documentary or sport.

The artists that represent this period came from varied artistic disciplines engaged with the cinematic frame, and they opened up the medium to a range of other options. Through harnessing the elements of liveness and performance they were able to work with cinema in new ways, which I see as being more akin to a process of dance development than visual arts practice, which is the more usual context in which they are discussed, even if they have been associated with performance. In my experiments and those of the artists discussed in this chapter it is evident they brought about a transformation of the cinema and created new ways of perceiving movement. For instance, Bukhari highlights how Serra's and Rainer's hand films demonstrate movement as the powerful material in the reading of the frame. Frampton's performances demonstrate how creative processes could create ruptures in the illusion of motion between the frame and projection. Campus actively experimented with his movement and the viewer's movement to

instigate transformation between the perception of the physical and the mediatised body.

Artists such as Malcolm Le Grice, Guy Sherwin, Trisha Brown, Merce Cunningham, Valie Export, Hollis Frampton, Peter Campus and Joan Jonas all experimented with the untapped potential of the cinematic apparatus's materiality as a versatile mobility. Joan Jonas, Merce Cunningham and Valie Export used the new potentials of the electronic image's materiality to transform modes of interaction between the camera image (material) projection (reproduction) and the screen (appearance). Through my own experiments, I explore the camera image as sculptural material and alchemy and along with McCall and Sharits I explore projection as the sculpting of space by the ephemerality of light. David Curtis, artist and co-editor of the British Film Institute's book on expanded cinema, states,' filmmakers such as McCall and Sharits highlight how experimentation with projection and screen reshapes 'film's materials – light, time, and process – [to] create new forms of aesthetic pleasure, free of symbolism and narrative' (Curtis 2007: 209 cited in Rees, 2011). This statement from Curtis demonstrates how by reviewing the ten artists and their works in combination I am able to analyse more than the sum of their collective parts. For instance, I was able to consider how these artists eradicated the convention of the screen as a flat surface to create cinema as a movement sculpture, entangling each of my three categories. In this new cinema the screen is no more a 2D representation, but becomes instead a multi-dimensional space. These artists undermined the conventional cinematic 'tension between abstraction and representation' (Turim 1980: 147). Their movement sculptures explore the screen as something appearing as an object that exists in the world rather than something that is separate from the world. While Campus explored the screen as appearance though the emergence of images and ideas, my experiments trial various enmeshing of aesthetic and conceptual ideas with media technologies. Informed by the artists discussed above this practice-led research has accumulated and revealed my own techniques. These techniques came together as a matrix (see below) which established my artistic language to illustrate a blending of cinematic techniques and methods with the cinematic frame.

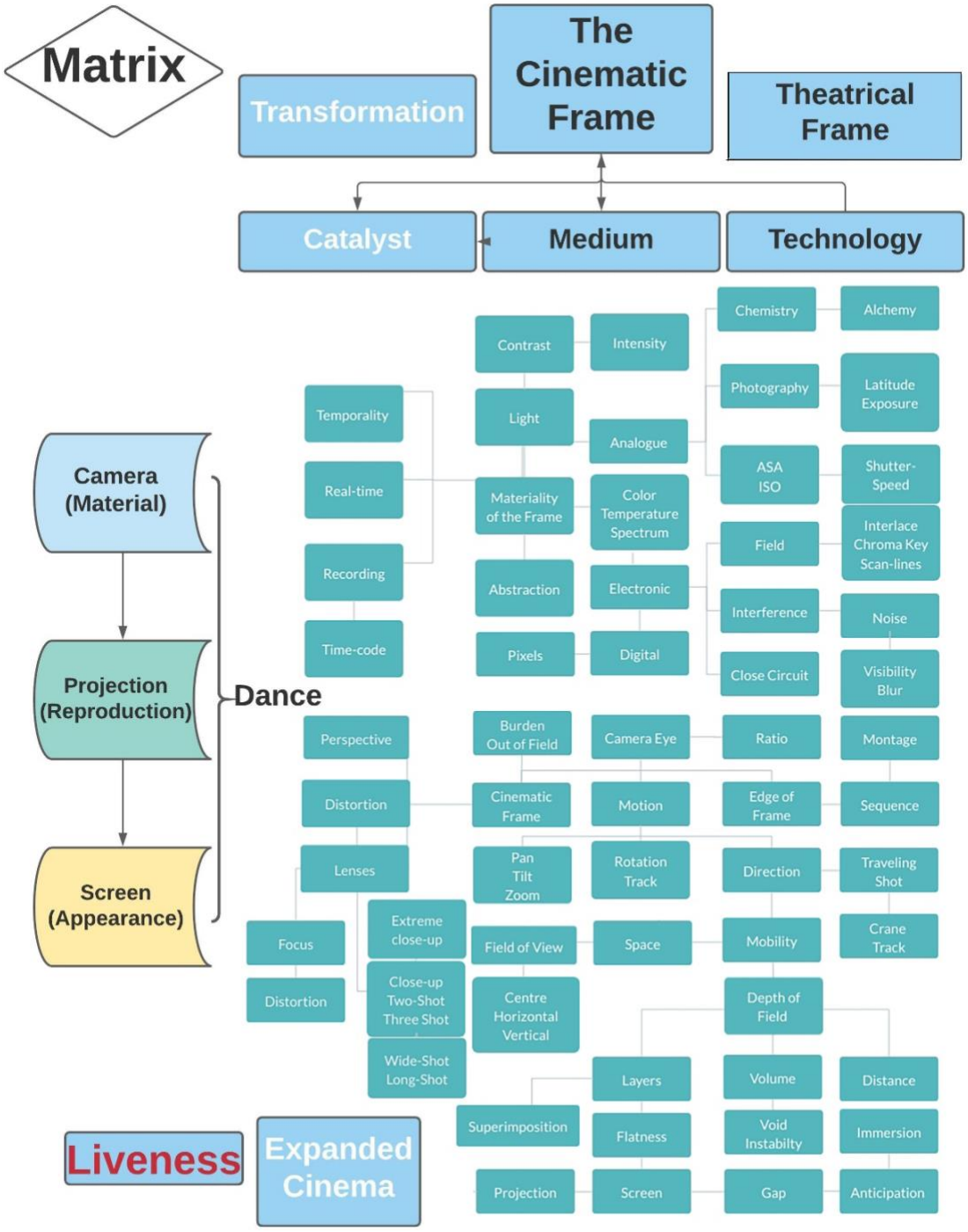


Figure 21: A matrix of terms that underpin the connection between cinematic craft and cinematic technologies and experimentation. Image Medlin M. (2020).

The terminology used in the matrix is mostly germane to the language of cinema that one sees regularly in publications like the *American Cinematographers Manual*. The matrix itself is influenced by expanded cinema and provides a reference for screendance. The sentinels for the *Cinematic Frame*, *Transformation* and the *Theatrical Frame,* stand at the apex of a raft of mainly technical terms. *Transformation* denotes the processes and outcomes of linking terms, while the *Theatrical Frame* reflects the hybridisation of the *Cinematic Frame,* which is key to my practice and explored in Chapter One. *Liveness* sits to the left of *Expanded Cinema* depicting a balance between the worlds inside and outside the cinematic frame.

The matrix started as an accumulation of terms, a vocabulary that combined aesthetic interests with techniques and in its first iteration relationships started to emerge. I wanted to develop a vocabulary and a language for my practice that could interact with other vocabularies and languages, such as editing and the movement languages used by my collaborators. The nodes expanded to hotspots of interaction and they charted pathways between intellectual ideas, practice and technologies that I explored in my experiments. The relationships between the terms reflect the thinking and practice in my experiments. For example, in *Experiment No. 10, Layering*, technically and aesthetically the terms flatness, superimposition, projection and/or screen are implicit. The lines connecting the terms in the matrix show what corresponds with what, and how I was working with the accumulation of terms to create a hierarchy. Through various iterations of the matrix, I expressed these terms as topics for experiments using, for example, *Experiment No. 1 The Frame, No. 2 Zooming, No. 3 Changing the Frame, No. 4 Point of View, No. 5 The Void, No. 6 Analogue and Digital, No. 7 Perspective etc*. The iteration process entangled my two methods of scholarly research and artistic practice. The value in developing a matrix that presents artistic practice in a representational format, is that my work will be able to reach new audiences.

CHAPTER THREE

SLIPPAGE: An interplay between the viewer, dance and the cinematic frame.

Figure 22: Diagram. Image Medlin M. (2019).

3.1 THE CONCEPT OF SLIPPAGE

The *Shorter Oxford English Dictionary* (1972) defines slippage as 'an act or instance of slipping'. I apply the term ‘slippage’ to experiments *No. 4 Objective Subjective Impro1* and *No. 27 Opening* as a mechanism to delve into the ways the cinematic frame has shaped, and continues to shape, the relationship between dance and the viewer. It builds on the dictionary meaning of slippage as an action, to lose traction, and to change position. In this chapter I define eight slippages, influenced by the cinematic frame, to consider the viewer’s experience of and within movement. I explore the viewer’s experience as an interplay, between dancer and the cinematic frame. I also use slippage to reframe classical concepts in cinema history to claim the viewer's experience of movement in cinema *as* dance, and to delve into the viewer’s slippage between different disciplines. In the slippages, I compare the intentions of my experiments with Soviet filmmakers Leo Kuleshov, Sergei Eisenstein, Dziga Vertov and Man Ray. For example, in slippage two I explore nuances in subjective and objective experience which underpins how 'subjectivity in film…continues to be an important key debate for film studies' (Chateau 2011: 12).[49] In experiments *No. 4 Objective Subjective Impro1* and *No.*

[49] Dominique Chateau is professor of the philosophy of art, aesthetics and film studies at the University of Paris-I Pantheon-Sorbonne. He has written more than thirty books. Of particular

27 Opening I use slippage to demonstrate the power of slippage as a multimodal exploratory tool.

3.1.1 Example Experiments

Experiments *No.4 Objective Subjective Impro1* and *No. 27 Openings* are the foundations for the eight slippages explored in this chapter. *Experiment No. 4*, *Objective Subjective Impro1,* is a four-screen installation and for the purpose of this thesis it is viewed on Vimeo as one screen. There are three more URLs linked to iterations of experiments *No. 4* which are included in the next segment of the chapter. The *Experiment No. 27, Openings,* URLs link documents a multi-image installation set-up across seven rooms and two corridors in the *Cinematic Experiments* exhibition (page 42). These two experiments allow me to explore the viewer's presence as an encounter with dance. By having to navigate each experiment's unique labyrinths of various movement pathways, the viewer becomes differently entangled in a combination of images, spaces, movements and journeys. What becomes apparent is that the viewer's presence becomes slippery as they slide through these various entanglements. In both experiments *No. 4*, *Objective Subjective Impro1*, and *No. 27, Openings,* my proposition is that the viewer experiences variations in slippage between: (1) a subjective and objective experience; (2) themselves and the cinematic image; (3) one cinematic frame and another; (4) themselves and the camera eye; (5) the art object and abstract cinema; (6) of hierarchies; (7) mediums in a system; and (8) between the agency of the dancer and the authorship of the camera.

Experiment No. 4 creates a comparison with the viewer's experience in *Experiment No. 27.* Importantly, the viewer is positioned differently in the two experiments so they can each explore variations in the experience of the dance across multiple screens. In *Experiment No. 4* the viewer is static, deciphering four entangled screens to make sense of a visual puzzle. In the documentation of *Experiment No. 27,* one can see how visitors/participants were invited into the installed kinetic sculpture and encouraged to move around and create new experiences and connections for themselves with different aspects of the

interest are, *Philosophy of a Modern Art: the Cinema* (2009) and *Arts and Multimedia: the Work of Art and its Reproduction in the Era of Interactive Media (1999).*

installation. The experiments create systems of visual information that encourage the viewer's awareness of their body in space whereby the viewer can decode what they are seeing and a proprioception they might experience. I constructed experiments *No. 4* and *No. 27* by entwining dance movement, media technology and physical space and, like the work of Peter Campus discussed in Chapter Two, it stirs the viewer's perception and cognition.

3.1.2 Experiment No. 4

Figure 23: *Experiment No. 4, Objective Subjective Impro1*, stills of the four camera perspectives. Image Medlin M. (2018). Left to right: Camera 1. the objective balcony position; Camera 2. the objective auditorium position; Camera 3. subjective camera from the dancer Vicki's point of view; and Camera 4. subjective camera from the dancer Lucky's point of view.

The reader is invited to view these experiments online now and return to them as points of reference as needed.

Vimeo URL: *Experiment No. 4 Objective Subjective Impro1:*
https://vimeo.com/260537829

The viewer is invited to get an impression of three iterations of *Experiments No. 4*
Vimeo URL: *Experiment No. 4 Objective Subjective* Impro2:
https://vimeo.com/263564206
Vimeo URL: *Experiment No. 4 Objective Subjective* Impro3:
https://vimeo.com/263595045
Vimeo URL: *Experiment No. 4* D *Objective Subjective* Impro5 with Mirrors:
https://vimeo.com/263526439

Experiments *No. 4*, *Objective Subjective Impro 1,2,3 and No. 4, Impro5D with Mirrors,* are four iterations of *Experiment No. 4*. The duration of each is about five minutes and the sound is the live camera recording. The dance was improvised, and I recorded multiple takes with iterations. The multiple recordings enabled the dancers to further explore the task, and for me to trial different changes in lighting and staging. In *Experiment No. 4, Objective Subjective Impro5D with Mirrors*, I was thinking about Svoboda's work with the void. By placing mirrors on the floor, I emulated his use of materials and reflection. I was interested in delving into the qualities of darkness discussed by Svoboda. As he commented on his design for the 1985 opera *Solemè*, 'there had never been a more complete darkness than that created by a mirror [...] because the mirror could not 'see' anything' (Svoboda 1989: 75 cited in Crisafulli 2013: 159).[50] I wanted to explore how movements vacillating in darkness might alter the performer's relationship to the spaces, or how it might dramatise the viewer's consciousness through the spatial illusions created by the reflections. This experiment is discussed further in slippage eight (page 135).

3.1.3 Experiment No. 27

Experiment No. 27 Openings, is an installation the viewer is invited to enter. It was exhibited in *Cinematic Experiments* (2019), a public exhibition I produced and directed with three collaborators (see the Experiments Acknowledgments section page 165). This experiment is one of the last I undertook and it is an example of what I was working toward when exploring the hybrid frame. It is a development of

[50] Fabrizio Crisafulli trained as an architect but is also a visual artist and theatre director. He is a lighting designer and the director for the theatre company Il Pudore Bene in Vista based in Rome.

The Frame as a Sculpture series, and it pays homage to Soviet filmmaker Sergei Eisenstein's 'dynamic square'.

In addition to a sculptural framing device and other architectural spaces and surfaces *Experiment No. 27, Openings,* incorporates experiments*: No.1, The Frame (*page 24*), No. 7, Perspective (*page 55*), Experiment No. 8B, Interference (*page 94), *experiment* No. *15A, B, D, The Camera Moves, and No.15 C, Depth of Field (*page 45*) and No. 17B, Digital Duet, (*page 46*)*. They are selected from a library of experiments created between 2017 and 2019, some of which were discussed in Chapter One and Two. Each of the original experiments were re-edited to work within the architectural parameters of the exhibition. Recorded in 2017 and 2018 the solo dance footage was choreographed and performed by Vicki Van Hout.

The viewer is invited to view documentation of *Experiment No. 27, Openings* online now and return to them as points of reference as needed.

Experiment No. 27, Openings
Vimeo URL: https://vimeo.com/330604208

The dynamic environment in *Experiment No. 27* was inspired by the hybrid of cinema and theatre practices, and the Avant-garde of the 1920s,1960s and 1970s. It is constructed with current digital projection technologies that map the eight source experiments onto architectural surfaces in a labyrinth of rooms. The surface mapping is enhanced by the experiments taking place in a theatrical void (a black frame) as discussed in Chapter One. The sound score was environmental and deliberately non rhythmical so as not to fix the rhythm of the dance to another source. The sound atmosphere presented a subtle and ambiguous hybrid of natural yet urban environments to compensate for the work's location in a shopping centre. Throughout the installation, looped movement transitions were unified through their tangle with the architecture. The experiment created a world where dance images gripped the surfaces of walls, doors and mirrors to create reflections that added an illusion of depth. The use of architectural features and motifs emphasise the way the cinematic frames offer vantage points and

perspectives to extend the viewer's gaze. Sculptural elements and the physical architecture enables a recalibration of cinematic conventions such as 'on' and 'off', real and illusion, abstract and representation. In the experiment it is intended that the viewer should perceive the continuation of a body's movement phase outside the visible frame. The viewer, like the Baudelairean socially mobile flaneur, becomes a 'mobile spectator who …[acted like] the shifting lens of the camera' (Rees 2011: 26). They become tasked with deciphering all junctures between cinematic images and architecture. *Experiment No. 27* continually invites the viewer to move and re-position themselves in multiple locations to alternate their attention between what they are watching and what they are experiencing. By shifting their attention and their position the viewer will experience variations in their reading of the experiment. My proposition is that through their changing interaction with the cinematic frames the viewer decodes their multimodal perceptions within the installation as slippages. In the rest of the chapter I explore the eight slippages and their relevance to this proposition.

3.2 STRATUM OF EIGHT SLIPPAGES

During my research into the interaction between a dancer, the cinematic frame and the viewer's point of view, I examined selected artists and scholars from the 1800s to the present day in the fields of physiology, architecture, psychology, the Soviet cinematic avant-garde of the early twentieth century, dance studies, and philosophy, in particular the work of Gilles Deleuze. The research produced a stratum of layers that surround the slippages. The stratum as depicted in the graphic below is a work in progress tool, analogous with the function of the matrix (page 98). It is an experimental method to map my research in cinema history, and to intertwine historical and theoretical perspectives. The stratum provides a structure for me to examine experiments *No. 4* and *No. 27* with a broader set of aesthetic interests that cross disciplines and time periods. It is a method to tease out interconnections between the viewer of *Experiment No. 4, Objective Subjective,* and *Experiment No. 27, Openings.* For example, in the experiments the viewer does not experience a linear order. The stratum reveals the viewer's experience of the dance and the cinematic frame as an accumulation. The stratum and its interconnections of slippages are not equally balanced or neat. Some slippages such as slippage one is longer than others because it explores a foundational period of scientific notions of perception. Slippage six is also longer because it unfolds a time jump from the influence of early twentieth century Soviet filmmakers to late twentieth century philosophy. Together the slippages allows me to examine experiments *No. 4* and *No. 27* in greater detail than I have the experiments in Chapters One and Two. They also enable a further exploration of the aesthetic elements in Chapters One, in particular the hybrid frame, the void, the edge of frame.

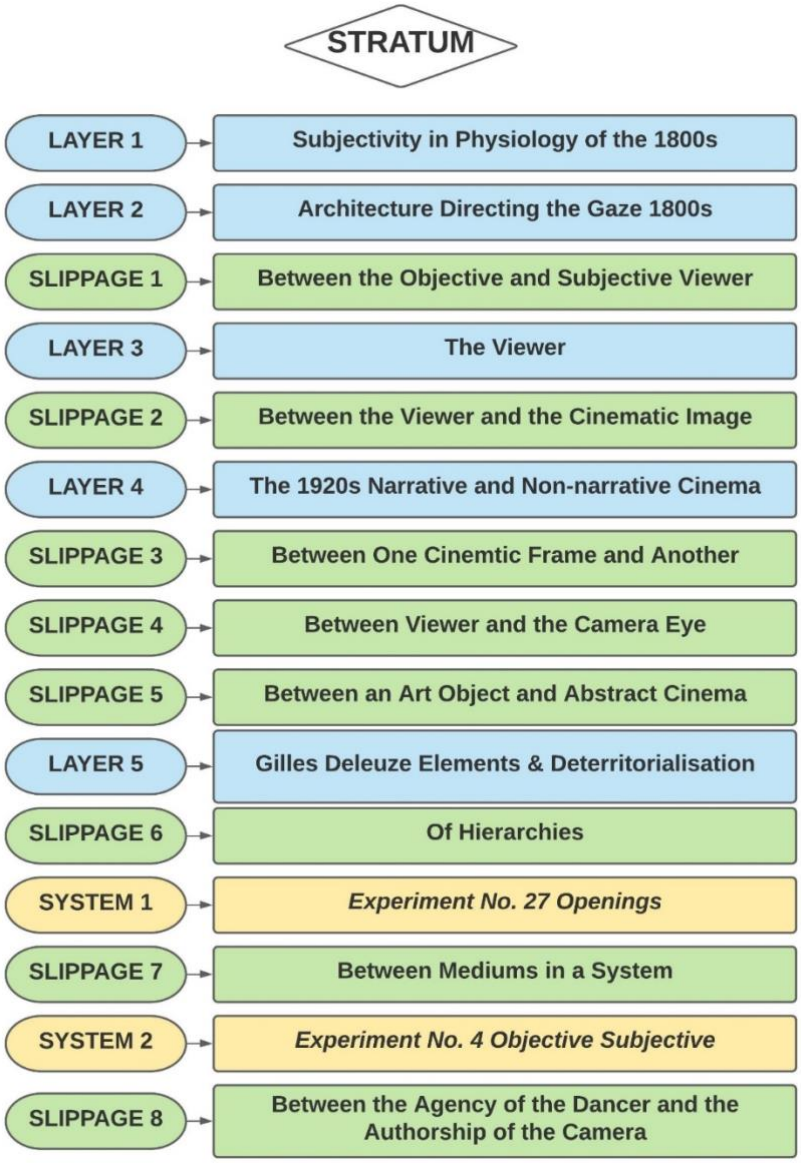
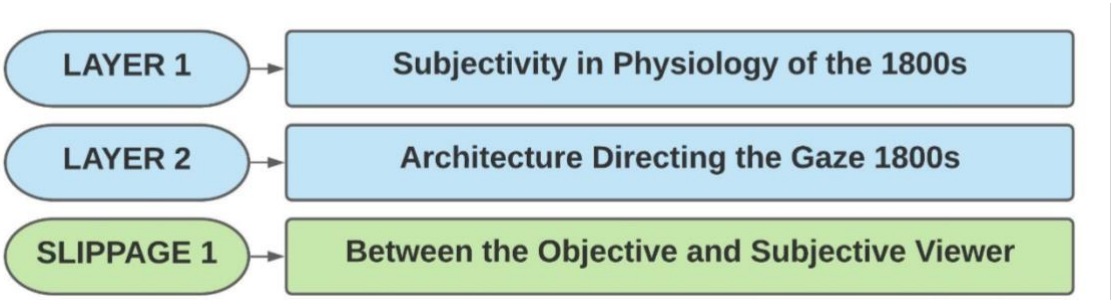


Figure 24: Stratum Diagram. Image Medlin M. (2019).

Using the stratum of layers and slippages as a tool to examine experiments *No. 4* and *No. 27*, I look to see what is occurring in the layering of different modalities, processes, technologies, physical space, time, movements, gestures, and how they combine to create perceptual experiences. Thomas Elsaesser and Malte Hagener comment that 'each type of cinema (as well as every film theory) imagines an ideal spectator, which means it postulates a certain relation between the (body of the) spectator and the (properties of the) image on the screen' (2010: 4). In experiments *No. 4* and *No. 27*, viewers are not invited into a passive relationship with the images being projected, but as participants they are

implicated physically. I work with the proposition that the viewer participates in slippages by virtue of their positional engagement in which case they can no longer be defined merely as a spectator. In these multi-screen dance and cinematic experiences, I explore the viewer's point of view from 'the presence of the image seen, felt and touched, to the sense organs that become active participants' (Elsaesser and Hagener 2010: 10). The experiments do not imagine an ideal spectator. On the contrary, I set out to explore the understanding, sense-making, interpretation and comprehension of the spectator. Furthermore, I explore cinema not as a technology but as a malleable medium with signature movements, contours and dynamics, which are triggered by its interaction with dance.

3.2.1 Slippage 1: Between the Subjective and Objective Viewer



My exploration of the viewer's point of view commences with a textual analysis of nineteenth century history of physiology that was undertaken by Jonathan Crary and Roger Smith.[51] Their research explores the time when the science of physiology 'began to expand as a specialist field' (Smith 2014: 9). These were also the early years of photography, an era characterised by an intense scrutiny of an individual's senses. Crary's work focuses on the functioning of the human eye while Smith focuses on 'touch and the muscular sense, and... the way subjective sensation (mind) related to an objective sensory stimulus (body and world)' (Smith 2014: 10). Both writers cite various original scientific texts to illuminate a contemporary viewer's sensorial experiences. These early writings provide different perspectives on the connections between the human mind, body and vision. Crary demonstrates how in the mid-1800s 'vision, …becomes itself an object of knowledge' to be owned (subjective) and to be observed (objective) (Crary 1992: 70). Crary and Smith are important because their research articulates early thinking through which to contemplate a cross-modal experience of cinema. I use their analysis and the original scientific texts they cite to imagine and probe the viewer's experience of dance at the intersection of contemporary media technologies. It builds a context as to why my experiments test the viewer's experience of cinema *as* dance.

[51] Johnathon Crary (1992) is a North American art historian and academic who has written extensively on the origins of art and visual culture, and since 1986 has traced the relationship between the functioning of the human eye and the camera. Roger Smith (2014) is an emeritus professor from Lancaster University in the UK and is an independent scholar specialising in the history of science.

Arthur Schopenhauer (1788–1860) proposed that perception comes from inside the human mind evidenced by the fact that colour could be perceived when one's eyes were closed. Goethe was another who supported this theory (Crary 1992: 74). What both writers rejected was a ‘model of the observer as a passive receiver of sensation, and instead proposed a subject [that] was both the site and producer of sensation' (Crary 1992: 75). Importantly, Schopenhauer affirmed that 'subjective' perception is separate from 'objective' sight. Thus he 'endowed the observer with new perceptual autonomy [that] also coincided with the making of the observer into a subject of new knowledge and new techniques of power' (Crary 1992: 79). Alexander Bain (1818 –1903) a Scottish academic argued in his book *The Senses and the Intellect* (1855) 'that elementary sensation was composed of the modalities of effort and resistance, and that from this originated [a] notion of self and other and of space and time' (Smith 2014: 11). Schopenhauer and Bain both characterise the viewer as an observer who is also the subject of new knowledge and who is aware of themselves, others, space and time.

The French philosopher Maine de Biran (1766–1824) stated that 'the eyes are bound to the rest of the body', and this engages the body in action or what de Biran calls ‘force’ (Crary 1992: 72). It is primarily through this ‘force’ that 'both [eyes and the body] are inextricably mixed with whatever object they behold' (Crary 1992: 72). Both Smith and Crary respond to de Biran's use of the term ‘force’. They discuss it as ‘coenésthèse’ defined by de Biran as ''one's immediate awareness of the body in perception'' where the viewer becomes bodily entwined with the object within their view. (Tisserand 1949 in Crary 1992: 72). On the subject of self-awareness, Smith introduces Charlton Bastian (1837–1915) a physiologist who used the term ‘kinaesthesia’ to denote a method by which the human body in motion, in the absence of sight, is aware of the position of its limbs:

> The word ‘kinæsthesis’ dates from 1880, and it quickly spread from narrowly medical or physiological usage to become the preferred term for the sensory system which makes it possible to experience the position, movement, and effort required to move the body. In the twentieth century, it

> became common to use ‘kinaesthesia’ to describe the conscious feeling of movement through muscular effort (Smith 2014: 3).

Maine de Biran's ‘force’ and Bastian's 'kinaesthesia', or the more contemporary term 'proprioception', consider the viewer's awareness and sensation of their own body in space and movement. These terms suggest that a viewer, as they watch a cinematic frame, interpolate with a dancer's movement. Karen Wood who is a dance practitioner and researcher writes that kinesthetic empathy ‘can be loosely defined as the sensation of moving while watching movement’ where the viewer can sense ‘... as if performing the movement themselves’ (2016: 245).[52]

These theories and ideas both inform and provide stimulus for experiments *No. 4* and *No. 27*. Crary’s and Smith's analysis fosters my interest in imagining the viewer’s cross-modal intelligence of mediatised movement in an installation. Maine de Biran, Bastian and Schopenhauer offer early theories with which to ruminate on how perception and sensation meet in the body to form layers of intelligence. While Schopenhauer, Bain and Goethe offer ideas to consider the viewer’s subjective and objective perceptions, Maine de Biran’s writings are older and perhaps by today's standards less scientifically correct. However, for me they each build a proposition that enmesh the eyes and body as the viewing body. Based on this research, my experiments strategically position the viewer to explore cross-modal sensations through notions of subjectivity and objectivity. Experiments *No. 4* and *No .27* seek to find nuances rather than binaries in the interweaving of these subjective and objective points of view. Crary says that Goethe proposed that 'subjective observation is not the inspection of an inner space or a theatre of representation. Instead, observation is increasingly exteriorized; the viewing body and its objects begin to constitute a single field of view on which the inside and the outside are confounded' (Crary 1992: 73). Goethe highlights what I consider in experiments *No. 4* and *No. 27* as a conundrum, a slippage between subjective perception and observation. Crary’s and Smith’s research in the early discoveries in physiology resonates with my own

[52] Dr Karen Wood is a dance practitioner and scholar. Currently she is a Research Fellow at the Faculty of Research Centre for Dance Research (C-DaRE) at Coventry University.

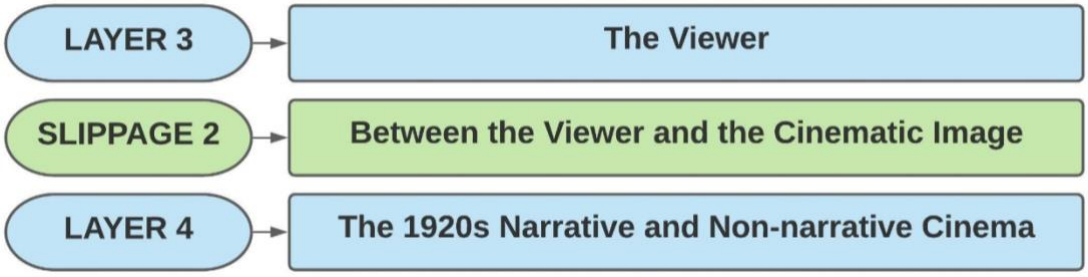
reflections on the discoveries and experimentations made in early cinema as will be discussed later in this chapter.

Drawing on these ideas, I experimented with how the viewer of contemporary media combines this theorised innate visual perception and motion with an intellectual construct of the cinematic frame + dance. For example, comparing the two experiments I test how the viewer's static and mobile perception of movement can be primed by watching a movement in the cinematic frame. According to Wood, 'there is little empirical qualitative research conducted on screendance in dance studies and no research to date in dance or film studies on the kinesthetic experience of watching screendance' (2016: 247). Although I am not undertaking empirical research, my experiments do devise two comparative systems through which to explore the experience of a viewer in relationship to dance and the cinematic frame. As I begin the next segment of this chapter the innate features of human perception explored by Crary and Smith form Layer 1, *Subjectivity in Physiology in the 1800s*. It is the foundation layer for my proposed slippages.

Layer 2, *Architecture Directing the Gaze in the 1800s*, broaches the authorship of the viewer's point of view. Anne Friedberg in her book *Window Shopping Cinema and the Post Modern* (1993) lists three types of historical architecture that introduce the notion of directing the gaze. The first architecture is the panopticon (1791), a prison designed around a central viewpoint which enabled prison guards to observe the entire complex. The second is the panorama (1792), a very popular form of public entertainment where wide-screen paintings, sometimes spanning three-hundred and sixty degrees, show big cities, landscapes and views to distant worlds. The third, the diorama (1823), is a museum-like environment or display. These architectures, because of the relationships they create between the viewer and the frame, are precursors to the cinematic point of view. For the observer in a public space, Friedberg's architectural examples develop the mobility of the gaze through access to distant worlds, and an illusionary experience of physical immobility. Conversely, they presuppose a fixed viewpoint such as the objective outside eye of the camera in the narrative cinema of D.W. Griffith, discussed in slippage three.

The research into the physiology of the 1800s discussed by Crary and Smith, when layered with the formulation of an objective gaze through architecture, differentiates and entwines the subjective experience and the objective experience. Together these histories inspire my exploration into the complexities involved in the entanglement of the viewer's point of view with the cinematic frame and dance. Together they form my first example of the necessary conditions for slippage. Slippage one, *Between the Subjective and Objective Viewer*, imagines a counter-balancing between the physiological and psychological thinking about human vision prior to the cinematic frame. It makes me think of my experiments as tools for analysis, because they unravel the 'subjective' as a sensory experience of what the dancer or viewer might see, feel or hear as they move, in contrast to their thinking about the construction of the experience – a viewpoint from the outside (objective).

3.2.2 Slippage 2: Between the Viewer and the Cinematic Image



Slippage two, *Between the Viewer and the Cinematic Image,* sits in the stratum between Layer 3, *The Viewer*, and Layer 4, *The 1920s Narrative and Non-narrative cinema,* discussed shortly. Layer 3 took form through a study of two German philosophers, psychologists and film theorists Hugo Münsterberg (1863–1916) and Rudolf Arnheim (1904–2007). Both Münsterberg and Arnheim wrote extensively about the cinema as a unique and artistically creative medium. I draw on facets of their theories, such as Arnheim's writing on a viewer's perception being relative to the framing of movement (1957: 31/74), and Münsterberg's writing on the illusion of depth formed by the viewer's knowledge of foreground and background, to more fully comprehend the real-world situations in which I work (2002: 67/68). My interest was to intersect my exploration into the viewer's

objective and subjective points of view with histories and philosophies of perception in film theory.

Münsterberg wrote about perception and cinema in his book *The Photoplay: A Psychological Study* (1916) and reissued in the 1970. His writing provides a link between subjectivity, as explored by Crary and Smith, and the psychology of the viewer in early cinema. José Moure in his article *The Cinema as Art of the Mind: Hugo Münsterberg, First Theorist of Subjectivity in Film* (2011), states that Münsterberg 'raised the problem of subjectivity in film and provided the foundations for what can be called in modern terms a spectator theory' (Moure 2011: 24).[53] In this theory 'the effectiveness of moving images is based on a psychological phenomenon that requires the mental cooperation of the spectator in order to achieve its full potential' (Moure 2011: 24). What I believe Moure is drawing on is the notion that the viewer must use their cognitive facilities to appreciate the complexity of information in the frame. So now the viewer is not only, as Goethe suggests, coercing their experience of an inner space through their observation as a single field, but intellectually cooperating to facilitate their role as a spectator. Moure further explores Münsterberg's theory of subjectivity in film by highlighting Münsterberg's analysis of the viewer's impression of depth. What Moure shows is that despite the cinema image's 'bi-dimensionality (of which the spectator is rationally conscious), cinema is able to produce a very intense illusion of depth (which depends on factors such as the movements of the characters towards the foreground or the background, the differences in dimensions of the objects, the shades, etc)' (Moure 2011: 26). Münsterberg's explanation of the viewer's experience of depth in the cinematic frame is that while the regular motion picture does

> not offer us [a] complete plastic impression, it would be simply the usual confusion between knowledge about the picture and its real appearance if we were to deny that we get a certain impression of depth. If several persons move in a room, we gain distinctly the feeling that one moves behind another in the film picture. They move towards us and from us just

[53] José Moure is a Professor of Architecture, applied arts, plastic arts, performing arts, epistemology of art teaching, aesthetics, musicology, music, art at the University of Paris 1, Paris.

> as much as they move to the right and left. We actually perceive the chairs or the rear walls of the room as further away from us than the person in the foreground (Münsterberg cited in Langdale 2002: 67) [54]

In *Experiment No. 27* through the notion of slippage two*, Between the Viewer and the Cinematic Image,* I was able to think further about Münsterberg's explanation on the subjectivity of depth on the flat screen. I considered the viewer's depth perception through subconscious and conscious processes in viewing cinematic image. For instance, in an early experiment I videoed two dancers whose task was to block or mask each other to make a third body. My response in *Experiment No. 27* was to construct depth in the image by combining a filmed dance performance of one dancer with the production techniques of masking, layering, mapping and camera movement. I exaggerated depth as a way of stimulating the viewer's perceptual relationship and entanglement with the cinematic image by framing a multiple of images as an architectural installation that the viewer could enter.

Figures 25: *Experiment No. 27 Openings.* Image Medlin M. (2019).

Arnheim in his book *Art and Visual Perception, A Psychology of the Creative Eye* (1974) explores the idea that movement of and in the frame act as keys to the viewer's engagement in the frame's transformations. He discusses the viewer's kinaesthetic perception of a camera's movement. He states that 'the setting photographed by the moving camera is seen moving across the screen mostly because the viewer receives kinaesthetic information that his body is at rest'

[54] is a scholar of art and visual. His editing of *Hugo Münsterberg's Photoplay and Other Writings on Film* (2002), stands out in his biography.

(1974: 379). What I understand Arnheim to be saying here is that cross-modal perception suggests that the viewer's dominant understanding of the camera movement is perceived sensorially and also, as Münsterberg's says, the viewer must use their cognitive facilities to appreciate the complexity of information in the frame. Arnheim is additionally pointing out that the viewer's relationship to the movement is based on their visual field, which forms a framework. For Arnheim, it is the viewer's interaction with this framework that allows them to perceive spatial shifts, that is to say, the way objects within the visual field interact with the framework. It is this interaction that creates relative movement. In my experiments I work with two frameworks, the cinematic frame and the architectural frame and I use the movement of a dancer in both frameworks, and the viewer within the architecture, to construct depth between the objects in the framework. Experiments *No. 4* and *No. 27* both construct these two frameworks and within them I explore the limits of the visual fields through the movement of the performer, the camera and viewers.

Arnheim also wrote about 'defamiliarization', a concept coined by the Russian formalist Victor Shklovsky in his essay *Art as Technique* written in 1917. Lemon and Reis in their translation of this work suggest that Shklovsky wanted to challenge 'the general laws of perception, [because] we see that as perception becomes habitual, it becomes automatic' (Lemon and Reis:1965: 11/12). Kevin McDonald in his book *Film Theory Basics* says Arnheim was interested in defamiliarization as a potential for cinema to change the viewer's perception of ordinary objects into something unfamiliar, terming it 'an important formal device, a part of film's basic language' (2016: 27). Arnheim's example of defamiliarization is the framing of a ballet dancer positioned above a transparent glass panel as seen in René Clair's film *Entr'Act* (1924) (see still image below). Arnheim writes, 'the strangeness and unexpectedness of this view [has] the effect of a clever coup d'esprit' (Arnheim 1957: 33). This idea was translated by Kevin McDonald as 'to get a fresh angle on a thing'. Moreover, for Arnheim, he says defamiliarization 'produces a purely visual or aesthetic pleasure' (2016: 27). Arnheim views the defamiliarization of images as images for their own sake 'divorced from all meaning' (1957: 40).

Figure 26: *Entr' Act*. (1924) Film still Clair R.

Contrary to Arnheim's concept of images being divorced from all meaning, I am interested in how the appearance of unfamiliar images produce dancerly qualities, which is an interest I explore throughout this thesis. Defamiliarization, like slippage two *Between the Viewer and the Cinematic Image*, re-examines these relationships. My experiments explore how the aesthetics and techniques of the cinematic image create unfamiliar visual and felt movements and space. Arnheim's theories further contribute to my research because he developed an inventory of cinematic techniques including 'composition (i.e., the use of framing, scaling lighting and depth of field), editing and special effects (e.g., slow motion, superimposition, fades and dissolves)' (McDonald 2016: 18/19). These techniques, he argues, renders film as something more than mere reproduction. Arnheim celebrated these tools as the necessary means for creative intervention and for developing a 'poetic language that belongs exclusively to film' (McDonald 2016: 18/19). I propose that my matrix (which is like Arnheim's tools) also brings about a defamiliarization of dance, the viewer and the cinematic image. Together they have potential to bring about new combinations through creation and production processes that change the viewer's perception of ordinary objects to the unfamiliar.

Münsterberg wrote about the viewer connecting to a subjective phenomenology through the narrative techniques of filmmaking. He depicts the cinema as a world in which the viewer's mind becomes immersed in fiction. When the viewer sees a shot in relation to other shots the context for the narrative develops. For Moure, 'Münsterberg saw in narrativity a kind of natural goal for the cinema' (2011: 24). For Münsterberg cinema was a 'freedom from the bondage of the material world' (1970: 79). He depicts a method by which the cinema creates another world different from the experiences of theatre, and different from the viewer's psychology, which is to say, he 'distinguishes the emotions felt by characters on the screen from those felt by the spectator in front of the screen' (Moure 2011: 33). He suggests that a subjectivity seen from the camera's point of view entwines the character's experience with the spectator's experience thereby producing a subjective phenomenology that the spectator acquires. The proposition in slippage two, *Between the Viewer and the Cinematic Image*, is not challenging Münsterberg's depiction of the viewer's engagement with the illusion of narrative cinema, but rather proposes an alternative. Experiments *No. 4* and *No. 27* challenge film scholar James Dudley Andrew's reading of Munsterberg's idea. According to Andrew cinema is 'in fact not on celluloid not even in the screen, but only in the mind which actualizes it by conferring movement, attention, memory, imagination and emotion on a dead series of shadows' (1976: 24/25). Slippage two expands the qualities of the medium's subjectivity that Andrew conjures-up, because it engages the viewer in not only stories but also in space, movement, abstract and poetic phenomena.

In my analysis, Münsterberg is presenting a vision of how the cinema constructs perceptual realms through which the viewer can slip and explore nuances of cross-modal mobility. In slippage two the viewer engages with the camera image, as Arnheim suggests, through their experience of kinesthetics information from the screen. This can be compared to Maine de Biran's 'force', which is none other than 'one's immediate awareness of the body in perception' (Tisserand 1949 in Crary 1992: 72). A second engagement comes through what Münsterberg calls the viewer's mental co-operation, and a third engagement through Arnheim's defamiliarization, an experience with the unfamiliar. These examples build the

complexity of the viewer's perception in my experiments. One can say slippage two is an example the spectator not passively receiving optical information but existing as a cognitive sensory being that enmeshes with the film visual aesthetics though multiple camera images and projections on multiple surfaces/screens.

3.2.3 Slippage 3: Between One Cinematic Frame and Another

The challenge to define cinema as a powerful and complex medium was taken up by early twentieth-century pioneers such as David Wark Griffith (1875–1948), who was a key figure in the development of editing techniques to structure narrative cinema. Of more interest are the Soviet filmmakers Sergei Eisenstein (1898–1948), Lev Kuleshov (1899–1970) and Dziga Vertov (1896–1954) who, through 'montage', experimented with various film structures. By developing narrative and non-narrative montage, these cinema pioneers individually contributed new ideas about positioning the viewer. It is their approaches to montage that come together to form Layer 4 of the stratum - *The 1920s Narrative and Non-narrative Cinema*. Although these pioneers were active over a hundred years ago, their experiments with forms of montage are still primary models for filmmaking. Hence, when experimenting with the relationships of one cinematic frame with another, often referred to as montage, their practices influenced my approach and thinking about the experience of viewer. Moreover, they provided the foundations for a film theory that continues 'to analyse the seemingly vast potential of film' (Chateau 2011: 7).

Through popular dramatic narratives a film language of the objective and subjective points of view evolved. A.L. Rees notes, using classic tropes such as varied distance from the camera, cutting at an angle for reverse field matching, that 'narrative cinema is the archetype of point of view at work in film' (2011: 8). For Deleuze Griffith montage is one of action (Deleuze 1983: 70). Much admired examples of popular dramatic narratives came from D. W. Griffith who became a

mythical 'father' of film – an accolade which Tom Gunning describes as contentious because it is a position that 'haunts film history' given Griffith's betrayal of the 'pure idea of film found in the work of Méliès and Lumière' (2006: 336). In D. W. Griffith's second silent film *Intolerance* (1916), he introduces an epic narrative. He invites the viewer to engage in the troubled lives of people from four time periods spanning from the fourth century to the period when the film was made. Kevin McDonald in his writing about Griffith says he uses a 'formula based on editing techniques such as cross-cutting and other innovations' to produce the dynamic rhythm for which he is known (2016: 13). By editing between the four stories, Griffith is asking the viewer through his film language (e.g. close-ups, medium shots, distant views, continuity editing of eyeline matching with seamless inter-cutting of the character's point of view) to consider three aspects. One is subjectivity and empathy with the circumstance of each character, the second is an interchange between the personas of the various characters. The third aspect focuses on the way in which the viewer is empowered to objectively judge as they consider an overview given from outside of the story. Through the parallel montage structure in *Intolerance*, the viewer can understand what capacity a film has to encapsulate and intertwine characters and storylines across time. D.W. Griffith develops his language in films such as *Corner of the Wheat* (1909), *Birth of a Nation* (1915) and *Broken Blossom* (1919). In these films, Griffith's notion of the camera's objective and subjective points of view were honed along with tropes, which aimed to 'preserve and locate the viewer's stability [and their] identification with camera and scene' (Rees 2011: 8). By using narrative structures to connect the viewer's journey within the film, D.W. Griffith protected the viewer from any slippage within the film. That is, he ensured that the viewer was always aware what their role was and how their persona(s) were developed though the film. While D.W Griffith was developing his language of subjective and objective points of view, Eisenstein, although influenced by Griffith's narrative editing, thought of montage as oppositions that take 'the place of parallel montage, under the dialectical law of the one which divides itself in order to form the new, higher unity.' (Deleuze 1983: 34). Hence, Eisenstein intentionally did not adopt Griffith's methods.

Sergei Eisenstein is a filmmaker and theorist who is renowned for his development of film ‘montage’ as a forced collision or meeting of two images. Eisenstein proposed and philosophised about the function of multiple types of montages. He also proposed ‘that montage is the whole of the film’, an idea he is perhaps best known for in his film *Battleship Potemkin* (1925). (Deleuze 1983: 29) His ideas were initially inspired by Lev Kuleshov, his teacher at the Moscow Film School in the early 1920s. Kuleshov was interested in the effect of film and so developed an experiment called the *Kuleshov Effect* to study the psychological impact of the ordering of images to create the power of suggestion, which was later used by psychologists to study the psychological behind the placement of images. His findings are still applied to the structuring of images in mainstream advertising. Ana Olenina writes about Kuleshov’s interest in dance.[55] She describes how he ‘negotiated the difference between live observation of dance and its cinematic presentation, urging the filmmakers to recognise editing as the most powerful tool they have at hand’ (Olenina 2016: 87). Kuleshov also proposed a fixed camera montage to transform a live dance so the viewer could experience the ‘multitudinous fragmented impressions’ (Olenina 2016: 87). However, as Olenina suggests ‘Kuleshov’s film put montage in the service of narrative’ and even though his ‘ideas laid the foundations of Soviet montage theory’, in practice Eisenstein’s and Vertov’s approach were more radical (2016: 95). Eisenstein’s was interest in a film's rhythm because it constituted transition, transformation and created change. Moreover, Eisenstein used montage as a tool to influence people on 'three levels: perceptual, emotional and intellectual' (Mullik 2019: 2).[56] I find a synergy between Eisenstein's experimentation with montage and my notion of slippage as the transition between a viewer’s cross-modal perception when watching cinema. Of particular interest is the transition from one image to another, which for the viewer can be experienced or perceived as a movement in the transposition of space. Eisenstein’s argument is that when forced together the images form a perceptual collision for the viewer thereby creating a momentary perceptual overlay. This idea is reminiscent of the flicker films by Paul Sharits discussed in Chapter Two (page

[55] Ana Olenina is assistant Professor of Comparative Literature and Media Studies at Arizona State University. Olenina is interested in how early Soviet filmmakers used expressive movement to explore the psychological ideas in their day.
[56] Gopalan Mulik is a film studies scholar from Kolkata, India who wrote a number of useful articles on Eisenstein’s montage.

87). For Eisenstein, the result of this forced combining of opposing images creates new meanings and new ideas that act as a 'stimuli [of] attractions that produce calculated effects on the audiences' (Mullik 2019: 2). For Eisenstein, the greater the dissonance the greater potential for new meanings.

Slippage three, *Between One Cinematic Frame and Another*, responds to the artist/filmmakers discussed in *Layer 4, The 1920s Narrative and Non-narrative Cinema.* For example, slippage three re-interprets Eisenstein's montage of attraction. In discussing the Soviet filmmakers, Deleuze says ‘montage itself constantly adapts the transformations of movements in the material universe to the interval of movement in the eye of the camera’ (Deleuze 1986: 38). So, what is happening in this slippage between one cinematic frame and another beyond the technical basis of cinema? For me, this transition is the act of an unfolding of movement where one cinematic frame is seen to morph into another. In slippage three images act on other images with all their facets being at once brought to bear. The images are in flow and continually becoming. In a slippage, as opposed to Eisenstein's collision of images, movement has an ambiguity that invites the viewer to transition and transform sensorially, emotionally and intellectually. Slippage three is the viewer's experience of movement between one cinematic frame and another. It plays not only on the literal joining between one cinematic frame and another, but like Eisenstein’s and Lev Kuleshov’s experiments it explores the perceptual moment and what effect it might produce for the viewer. Moreover, like Eisenstein’s and Lev Kuleshov’s experiments, slippage three explores how the joining of image frames establishes the viewer as a protagonist in the transformation of images.

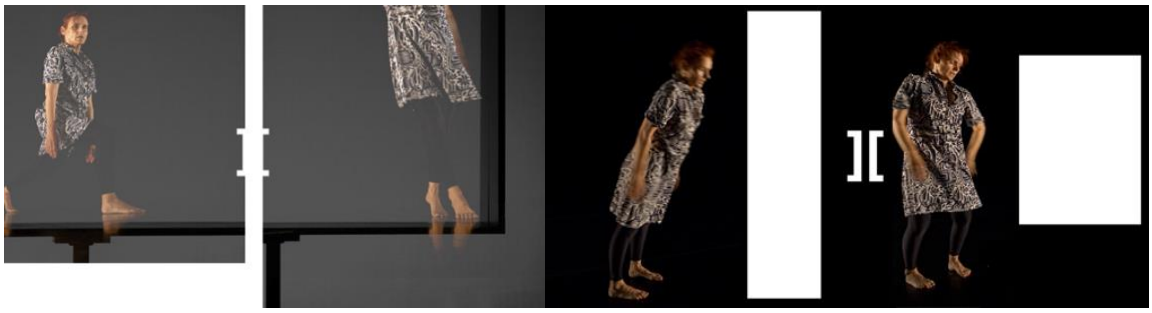


Figure 26: *Experiment No. 27.* Image Medlin M. (2019).

Figure 27: *Experiment No. 27.* Image Medlin M. (2019).

To illustrate the way I explore slippage three I have selected pairs of images from *Experiment No. 27 (*page 104). However, because they are not in situ or moving they can only show a distilled example of the transition where one cinematic frame becomes another in a spatial context. If you look at the still images from left to the right one can imagine the animated movement. The pairs show how the framing, the scale of the bodies, digital objects, and the physical space, each become elements in the perception of transition from one cinematic frame to another. The original sources are experiments *No. 2 Zooming, No. 8 Interference* and *No. 17B Digital Duets*. *Experiment No. 27* shows a versatile way of making new movement by linking and slipping the relationships between layered sequences of movement. By joining the images, the viewer can experience the parameters of time, movement and space such as orientation, distance, depth, and scale. In *Experiment No. 27* the cinematic frames can be reconstructed by the viewer and experienced as various montage movement phrases such as jump-cutting, looping, sustaining and other patterns of repetition where each joining and repartition creates a new movement through the meeting of two images. Eisenstein was another who joined unlike images together. My suggestion of repeating, sustaining, jump-cutting and looping image sequences might seem to be a version of Eisenstein's montage of attraction. However where he uses images as colliding building blocks to bring about new ideas, I use the joining of one cinematic frame with another to bring about new phrases of movement and new perceptual experiences of movement.

3.2.4 Slippage 4: Between the Viewer and the Camera Eye

Figure 29: *Man with the Movie Camera*. (1929) Film still Vertov D.

Dziga Vertov is another critical figure from early Soviet filmmaking whose theory and practice I reconsider through slippage. He was working in the same milieu as Eisenstein even though they were critical of each other. Vertov is best known for his film *Man with the Movie Camera* (1929). He wrote articles and manifestos such as *Kino Eye* (1923), an ode to the 'movement' and 'authority' of the camera. While his *WE: Variant of a Manifesto* (1922) was a radical approach to filming making, his *Kino Eye* manifesto (like Eisenstein's theory of attraction) was a departure from the relationship to the cinematic frame offered by narrative montage styles discussed by D.W Griffith. The method Vertov uses to create a point of view in his films is what I consider to be a non-narrative yet subjective approach that tries to create new perceptual experiences for the viewer. Vertov considered people to be machines:

> even the most charming peasant woman or the most touching child – was presented as a material system in perceptual interaction. They were catalysts, converters, transformers, which received and re-emitted movements, whose speed, direction, order, they changed, making matter evolve towards less 'probable' states, bringing about changes out of all proportion to their own dimensions. (Deleuze 1986: 38)

Vertov's camera was an auteur. Like me, he was interested in the perception of movement and he 'compared himself to a visionary engineer' (Olenina 2016: 95). In reference to the way I position the viewer in my experiments, Vertov's camera eye, as if possessing some sort of subjective autonomy is an interesting point for

reflection. In experiments *No. 4 and No. 27* I intend the viewer and the dancer to be the camera eye and vice versa. Vertov says, 'the kino-eye lives and moves in time and space; it gathers and records impressions in a manner wholly different from that of the human eye' (1984: 15). He wanted to use cinema to visualise images that 'cannot [be] realized in life' (Vertov 1922: 9) so he constructs the camera as the subjective eye of every person. This is similar to the role I create for the viewer watching experiments *No. 4* and *No. 27.* In both experiments I compare the mechanical eye and the human eye and give them equal value, which taken together form the experiment. Vertov's intention was to use the mechanical character of the camera to give a population migrating from their rural life to the city an appreciation of the urban world. His approach is to engage the viewers with the camera eye, which for him is 'more perfect than the human eye' (Vertov 1984: 15). It is this synthesis between the camera eye and the viewer's eye that is my fourth example of slippage. Slippage four*, Between the Viewer and the Camera Eye,* is a fundamental exchange between a viewer's subjective reading of the world and the authorship of the camera eye. In my experiments slippage four is a synthesis of Vertov's perfect camera eye with a contemporary human eye's sensory, emotional, aesthetic and cultural subjectivity. I share Vertov's aim to offer the viewer new perspectives and ways of experiencing their environment through the camera eye and to 'transfer the viewer's eye to the successive details that must be seen' (Vertov 1984: 15). My fourth slippage proposes a viewer's subjective point of view in an exchange with the camera's eye as a dance denoting a point of view.

In slippage four I reconsider aspects of the pioneering cinema practices of Eisenstein and Vertov as slippages because their artistic experimentation reveals visual phenomena for the viewer. My revival of these critical figures is similar to other researchers in that it 'proves that the history of film theory is not a teleological story of progress to ever-more comprehensive or elegantly reductive models' (Elsaesser & Hagener 2010: 6). Rather, it is a history that adopts new meanings and contexts. Eisenstein and Vertov created a zeitgeist for artistic and theoretical experimentation that went beyond early narrative storytelling and proposed new, and fewer, passive relationships between the viewer and the

cinematic frame. By juxtaposing the dancer's, the viewer's and camera's points of view in equal measure in *Experiment No. 4,* and the viewer's and camera's points of view within a physical space in *No. 27;* I wanted to see what emerged. The ideas Vertov explored in his *Kino-Eye* manifesto empowered the camera as an author to expand visual phenomena. 'Now and forever, I free myself from human immobility, I am in constant motion' (1984: 16). In this quote Vertov is writing from the camera's perspective, and his passion and determination for the camera's potency resonates with my understanding of how slippage four breaks open the boundaries of human perception. In contrast with Vertov, I propose there is equal value to the authorship of the camera eye and the viewer's bodily experience of the image as a spatial exchange.

3.2.5 Slippage 5: Between the Art Object and Abstract Cinema

The film *Emak-Bakia* (1926) made by Man Ray (1890–1976) includes objects by him and sculptures by Picasso. It was part of a new art cinema and is an early example of a visual artist creating abstract dance *as* cinema. *Emak-Bakia*, a film hailed as both Dadaist and Surrealist, was 'founded on a new understanding of the point of view, both for the artist and spectator' (Rees 2011: 7). Rudolf E. Kuenzli quotes Man Ray as saying of *Emak Bakia*, 'I complied with all the principles of Surrealism: irrationality, automatism, psychological and dramatic sequences without apparent logic, and complete disregard for conventional storytelling' (Man Ray cited in Kuenzli 1996: 3).[57] *Emak-Bakia* demonstrates slippage five *Between an Art Object and Abstract Cinema*. As a slippage, it explores a reframing whereby experimentation with human movement and the cinematic frame transforms the art object.

Man Ray was an artist exploiting a new medium in his experimentation with abstract narrative progression, which he explores through playing with light and movement around music halls. For example, in the film we see 'the close-up swivel action of lower legs and feet in a Charleston step' (Whyte 2016: 65). This breaks away from conventional rhythms of movement and perspectives to create

[57] Rudolf E. Kuenzli a scholar interested in theory and literature of the nineteenth and twentieth centuries, notably interarts, and avant-garde with particular focus on Dada and Surrealist films. His other position is as director of the International Dada Archive at the University of Iowa.

rapid camera movements that abstract the interplay between subjective and objective points of view. This interplay confounds the expectation of narrative sequencing by removing the human face and also by cutting between fragmented space and fragmented bodies. He starts with an utterly chaotic camera movement and then turns the viewer's subjectivity into a pig by giving them a pig's point of view. He spins them around a tree making them so dizzy that they see an implausible number of translucent looking women. In this example, I understand Man Ray to be combining the human body and the camera to create an abstract non-figurative movement, *as* dance.

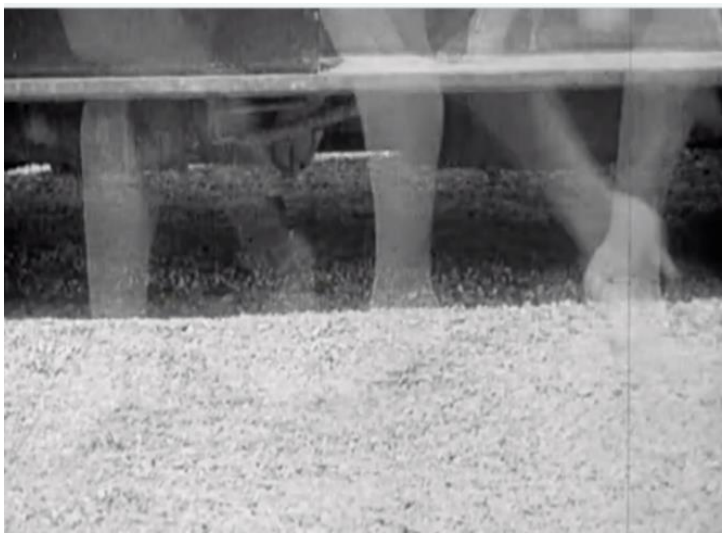
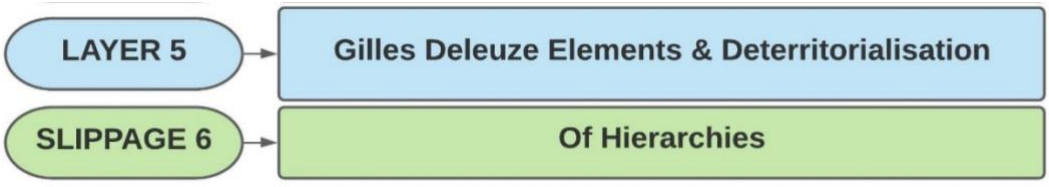


Figure 30: *Emak-Bakia* (1926) Film still Ray M.

The use of human and camera movement to interchange between subjective and objective points of view is another example of a radical departure from the narrative cinematic frame developed by D.W. Griffith ten years earlier. It is also a radical departure from cinema theorists Ralph Stephenson and Jean R. Debrxi who, forty years later in *The Cinema as Art* (1966), proposed that a change of viewpoints by the resequencing of cinematic frames offers 'film vision … the same effect as ordinary vision' (1965: 64). In this, Stephenson and Debrxi constrain the viewer by proposing that the cinema's task is to construct an acceptable reality. Whereas in *Emak Bakia,* Man Ray is contrasting the known with unknown points of view that were produced by the radical movements. In the film he created experiential camera movements experienced as a dance from an abstracted camera viewpoint. In this sense, *Emak-Bakia* sits closer to the Cubist visual art

philosophy of abstracting form through movement. It suggests an artistic approach where 'film represents much more than what is depicted on-screen' (Currie 2011: 50/51). Underpinning slippage five, May Ray shifts between art object to abstract cinema and it's an early example of how new ideas of dance contribute to cinema's history as an experimental artform. This slippage is implicit in the works of the Dadaist and the Surrealist as well as the expanded cinema movement. Each of these movements contribute to a breaking down between art forms. In a relatively short seventy years the combination of these movements forged an experimental vernacular in the history of Western art, which I imagine is present in the way the viewer of experiments *No. 4* and *No. 27* experience media art and interdisciplinary practice. For example, the fact *Experiment No. 27* was presented as an expanded cinema installation in a pop-up space brought into question a relationship between it as an art object and as abstract cinema. It played with visitor's rituals, and the use of mediatisation of contemporary art spaces such as the cinema, the black box and proscenium Illusionistic theatrical spaces, and white public gallery spaces. With the way I position the viewer in *Experiment No. 27* I am extending and accentuating the radial shifts between the art object and the cinematic frame, which continue to be examined by the abstraction of cinema. I see both experiments *No. 4* and *No. 27* as creating slippages that in turn create frames, which stretch new moulds that can circulate between art forms and offer the viewer various relationships to media art.

3.2.6 Slippage 6: Of Hierarchies



Gilles Deleuze is a French philosopher who published prolifically. He is famous for his many monographs interpreting the work of other philosophers such as Nietzsche, Bergson, and his friend Foucault. He is also well known for his collaboration with Félix Guattari. His seminal works *Cinema 1: The Movement Image* (1986) and *Cinema 2: The Time Image* (1989) are complex and have been extensively studied and written about by scholars and students. Exploring

Deleuze's ideas moves my research forward in time from the early twentieth century experiments to a later twentieth century realm of philosophical and conceptual thinking. In Chapter Two I explored Deleuze's 'out-of-field' theory interpreted by Bukhari in relation to Yvonne Rainer's and Richard Serra's hand films (page 81). My intention in this section is to pick up on the concept of deterritorialization as explored by Deleuze in the *Movement Image* (1986). This particular concept is central to Layer 5, as it challenges the conditions for some of the perceptual, phenomenological and theoretical ideas raised by Münsterberg, Arnheim, Stephenson and Debrix. Slippage six *Of Hierarchies,* has also been inspired by the way in which Deleuze's writings on elements in deterritorialization activated a freeing of relations in the cinematic frame.

Layer 5 in *Cinema: The Movement Image 1* (1986)*,* outlines Deleuze's response to philosopher Herni Bergson's theory of the consciousness of duration. (Deleuze 1986: 11). Bergson wanted to correct what he saw as a misconception of time created through the cinematic illusion where the brain's experience of an image 'is nothing but ... an interval, a gap between action and response' (Deleuze 1986: 62). For Deleuze, Bergson sees what he calls the intermediate image as a way of 'getting at time, describing duration on screen' (Zabel 2016). Deleuze analysis is important to cinema, however he says that for Bergson and others such as phenomenologist Merleau-Ponty, 'cinema is only a false ally', that is cinema is not their focus (Deleuze 1986: 57). Deleuze writes how a set of elements that reflect Bergson's universe constructs a totality of images that unfolds through time. He proposes each cinematic image to encompass a totality of elements are creating sets, or an assemblage of mobile sections of duration that comprise any number of motion images connected by a thread. Yet, each set is utilitarian and non-hierarchical and has its own qualities that come together in relationships within each frame. These are intermediate images that break cinema from 'the conditions of 'natural' perception upon which phenomenology is based' (Rodwick 1997: 23). This is only a short synopsis of a very complex argument by Deleuze. Deleuze's full philosophical and conceptual analysis is not however my main interest. A crucial difference to consider from the outset is although Deleuze wrote about his idea, in addition to this writing I examine my ideas through the process of creating

and reflecting on my cinematic experiments. I find Deleuze's proposal of a set of elements as a totality of images unfolding an interesting way of thinking about the value of each of the elements in experiments *No. 4 and No 27*. His ideas are providing a context for the analysis of my experiments. Principally the loss of hierarchies in cinematic frames, which challenges my experiments by providing different perceptual contexts than those of Münsterberg, Arnheim, or the nineteenth century history of physiology discussed by Jonathan Crary and Roger Smith in slippage one (page 117).

In slippage six Deleuze's writings are not analysed or applied, rather I use them to consider the interrelations between a set of elements I brought together in experiments *No.4* and *No. 27*. This process draws on Gary Zabel's online lecture series on Deleuze's intermediate image and David Norman Rodowick's book *Gilles Deleuze's Time Machine* (Rodowick 1997: 23).[58] Deleuze's proposition is that elements in the cinematic frame comprise a set. This idea accentuates my approach to the cinematic frame as conditions that bring about an abstraction in movement phenomena, as opposed to a narrative of characters, or a subjective and objective binary, or what Deleuze termed 'natural perception' (Deleuze 1986: 57). Exploring the intermediate image reminds me of Frampton's *A Lecture* (1968) discussed on page 89, because if a change in elements is spread over time it appears similar and you don't notice the difference. However, if one moment is exceptional then it reframes the whole. In experiments *No. 4* and *No. 27* I work with the notion of momentary interactions between dance, the cinematic frame and the viewer to destabilize traditional hierarchies of time, space and movement.

Deleuze's writing on intermediate images as non-representational elements in time motivates slippage six *Of Hierarchies*. In this slippage, images and objects are reassessed to gauge their entanglements with perception. There are no more preconceived hierarchies as all elements are equal. Deleuze's abandonment of traditional hierarchies has a similarity to Man Ray's abstraction in *Emak-Bakia* (1926) in that it does not emphasise traditional perspectives of reality in the

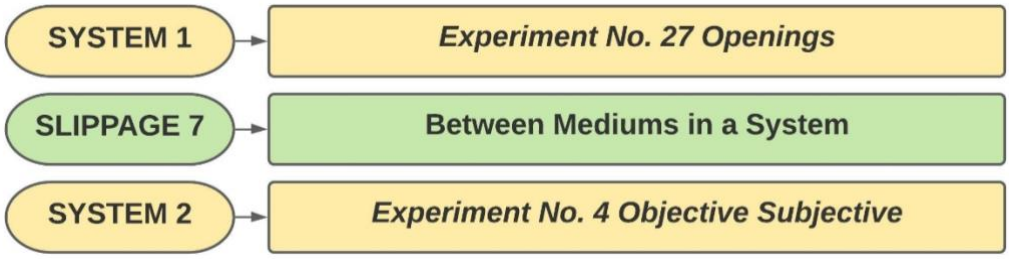
[58] David Norman Rodowick is a film theorist and curator. He is the Glen A. Lloyd Distinguished Service Professor at the University of Chicago.

process of cinematic elements coming together. Through his composition of elements, Deleuze makes the point that a cinematic frame gives a common standard of measurement to things that do not have one. Here new relationships are made. For instance, the 'long shots of countryside and close-ups of the face, an astronomical system and a single drop of water – parts which do not have the same denominator of distance, relief or light', all become equal in the cinematic frame (Deleuze 1986: 15). Deleuze names this effect a 'deterritorialisation' of the image. In experiments *No. 4* and *No. 27,* I consider this notion in reference to the complex contents of the cinematic frame, and how they inform the viewer's reading of the relationship between dance, the architecture and the apparatus reproducing the cinematic frame. Further to this, I proposed that the viewer can interpret and reinterpret the multiple elements when reading the image.

From my experience as a viewer entering *Experiment No. 27,* I find that I first identify elements, and then I need to continually interpret the scale of one body to another body, to my body, and to time and the environment. In *Experiment No. 27,* I work against the continuity in the duration of an image sequence and space so as to leave the environment as something that is continually emerging. My aim is to offer the viewer multiple ways to reposition themselves and reframe the combination of elements. In this experiment the viewer is in a slippage of their own perceptual hierarchies; for example, slipping between senses, temporalities, bodies, materialises, locations and forms. When viewing the assemblage of elements in *Experiment No .27* it becomes clear that the viewer's preconceived relationship between the variety of elements is brought into question. Moreover, that the experiment creates abstracted and conceptual interpretations of time, self, horizon and environment, that suggests non narrative readings of the human body's role in cinema. The desired outcome is for the unpredictability of the viewer's slippage *Of Hierarchies* to invite the cinematic frame as a counterpart in a dance duet. Here it is the viewer's movement/perception between a destabilizing of hierarchical elements that is dance. The viewer's interpretations also connect with this notion of deterritorialisation as a way of encouraging them to find new points of view and new relationships between themselves and the dance environment.

Figures 31-33: *Experiment No. 27* documentation images. Images Medlin M. (2019).

3.2.7 Slippage 7: Between Mediums in a System



My contemplation *Of Hierarchies* evolved into slippage seven *Between Mediums in a System.* It is a way of thinking about the combination of elements brought together in experiments *No. 4* and *No. 27*. In slippage seven, I use the term mediums and systems to incorporate the type of art making inherent in combining film, video, dance, sculpture, sound design, design and installation with methods such as projection, editing, and programing. Additionally, *Experiment No. 27,* as discussed in this segment, is also part of systems because it combines my earlier experiments in an installation that the general public can interact with. I go into more detail about *Experiment No. 4* in slippage eight below. *Experiment No. 27* took place across a carefully designed site of multiple projected image surfaces that formed new architectures. It was designed through a blend of moving image sequences, architectural spaces (rooms and corridors), surfaces, sculptural elements, reflections and multi-media technologies (camera's, projections,

hardware, graphics and editing). This system generated qualities of human movement by embedding them with these other elements. The experiment connected an open system that produced a media architecture that was experienced by the viewer as participant. They became part of a mercurial amalgamation of limbs in motion, looping arm phrases that slid over and covered the space in various states of transparency, colour, refection. These elements acted as a soft machine or apparatus that metaphorically invited the viewer to engage in the slippage between the various mediums in the system.[59] Through this amalgamation of elements and mediums I aimed to destabilize the notion of cinema as discussed in slippages one to five and to find new ways for the viewer to engage in cinema *as* dance.

[59] Soft Machine is the title of a body of artistic work, performances, video art and photographs, an encyclopaedia of eighty eight choreographers from five Asian countries created by Choy Ka Fai.

Figures 34 -38: *Experiment No. 27* documentation images. Images Medlin M. (2019).

Slippage seven built on slippage six's proposal that the viewer/participant catalyses elements to find meaning in the arrangements of elements. In the creation of these experiments/systems I shifted hierarchical limitations that suspend the viewer between self and other, here and there, past and present, and the real and not real. In experiments *No. 4* and *No. 27* the viewer becomes unstable as they experience the fluidity in movement, space and the elements of the media and architecture. They have the ability to immerse themselves in the mediums that make-up the systems. The numerous cinematic frames created in the systems are each moulded in time and space to construct variable perceptions through the viewer's actions. Evaluated against one another the cinematic frames generated in each system produce an environment where they can work in

tandem, loosening the environment and enforcing an evolution in the interaction between them. For their part the viewer is offered a mobility to explore how each moment, gap, interval, glance, movement, shift in perspective, footstep, can entwine or generate an unexpected response from the mediums within the systems. In slippage seven the viewer/participant is perceptually, intellectually, kinaesthetically and digitally mobilised within a system, and within this their mobile point of view is such that they become the dancer and the dance. In other words, as they move in the environment, they are the dancer. And it is precisely because the viewer/participant is intertwined in the domains of architecture and media technologies, and in the kinaesthetic, perceptual and intellectual domains of dance, that their experience can be explored *as* dance. One could say that my two systems, experiments *No. 4* and *No. 27,* each evolved a hybrid cinematic-dance system.

3.2.8 Slippage 8: Between the Agency of the Dancer and the Authorship of the Camera

Figure 39: *Experiment No. 4* four camera layout. Image Medlin M. (2018).

Experiment No. 4 (page 102) is a system that entangles four camera views of a dance improvisation by Vicki Van Hout and Lucky Lartey. The dance was developed in the studio over nine days. Throughout the development, the dancers and I discussed how the wearing of cameras on their forearms enticed them to create movement choices that prioritised the camera. We combated this by finding ways to elevate dance tasks that prioritised the dancers' agency rather than the camera eye.

A five-minute movement task was developed where in each iteration (page 103) the dancers could randomly alternate between four main intentions: a) being a camera; b) embodying the rhythm of their dance for the camera; c) making their

own dance phrases to be looked at by an audience as if on a stage; and d) improvising with one another. The dancers were also trying to use the whole space. It was anticipated that the viewer would sense the experiment as an improvisation through the dancers' agency, because they can be observed to randomly shift intentions.

Experiment No. 4 was videoed in 2018 in a studio designed to emulate the architecture of a proscenium arch theatre. It simultaneously recorded two fixed camera perspectives in cameras 1 and 2 as seen in the diagram above (authorship – objective) with cameras 3 and 4 placed on the dancers' forearms (agency – subjective). To display the experiment in video editing, I created a wide four-screen layout and synchronised it in a single frame as a landscape. *Experiment No. 4* is intended to create a cross-modal experience of dance for the viewer by creating an experience that gives both the pleasure of watching the dance through the camera's eye, and the other as if they were in the dance. This intention is juxtaposed with Arnheim's notion of an objective framework (discussed on page 116) created by the proscenium stage frame, which I used to ground the viewers' bearings. The intent of the experiment is to explore how a viewer's gaze and experience can fluidly slip through subjective and objective nuances that are triggered by the dancer's agency as they shift intentions (in cameras 3 and 4), compared to the proscenium stage frames (in cameras 1 and 2). From this experiment/system emerged slippage Eight, *Between the Agency of the Dancer and the Authorship of the Camera.*

To date, I have not displayed *Experiment No. 4* or presented it publicly. In this section I reflect on my own experience in which the four points of view problematise spatial processing between the perspectives. From a single vantage point a viewer can continually shift perspective from outside, that is, the objective (image to image) views in cameras 1 and 2 to a body-based subjective (self-as-dance image) view in cameras 3 and 4. For the viewer the four perspectives simultaneously produce a slippage between the feeling and aesthetic presentation of the dancer's changing intentions. Alternatively, as the viewer, I can read the composite of the four images and engage with how any one image informs the

others. By altering my attention in this way, the self-as-dance image is more disorientating than the proscenium stage. I propose it is this shift between visual disorientation and orientation that generates the feeling of slippage. Furthermore, the viewer can engage with the slippage as a kind of puzzle that includes movement and figures not immediately visible within the scene. As with Münsterberg's explorations, *Experiment No. 4* prompts the viewer to move away from a primarily visual experience to a more multi-sensory response.

3.3 CONCLUSION CHAPTER THREE

Experiments *No. 4* and *No. 27* can be seen as a continued conceptual exploration of a number of features. First, the viewer's shifting perception and sensation between the camera's static, mobile and unstable eye. Second, through the viewer's agency and the camera frame's authorship, and last, by looking for nuances beyond the objective and subjective points of view. Whilst I am interested in the viewer's objective real-time de/construction of the cinematic frame, I am equally captured by the imagination of the viewer's subjective real-time de/construction of themselves as a protagonist who is simultaneously embodying the point of view of the camera and/or the dancer. To me, the exploration of the viewer's point of view is not as a narrative of a fictitious character, but as an experience of their slippage within a multi-sensory system.

Chapter Three identified historical periods of discovery relating to visual perception that informed my experiments. My slippages demonstrate a playful yet rigorous research into the mind and body in early nineteenth century physiology. I discussed a number of theoretical frameworks from the twentieth century through which I could further explore the slippage between the viewer, dance and the cinematic frame. I argued that there is a complexity in these relationships that warrants attention, and the lens I provided for this was the stratum of layers, slippages and systems. In the eight slippages I showed how these complex relationships can articulate the viewer/participant's experiences. In the chapter I separated slippages from layers and systems as modes of analysis, while recognising that distinctions between them are not always solid, and furthermore are simultaneously in operation and overlap. Slippage one provided scientific research from the 1800s as foundations to explore a viewer's innate slippage between the objective and subjective. Slippage two moved forward in time to the twentieth century and drawing on the work of Hugo Münsterberg and Rudlof Arnheim, I explored their proposals concerning the viewer's potential conscious and innate perceptual relationships to the cinematic frame. Slippage three compares the position of the viewer in the development of narrative and non-narrative film making in the 1920s. Slippages three and four utilised Soviet filmmakers Sergei Eisenstein's and Dziga Vertov's montage to examine the

viewer's relationship of one cinematic image to another and to the camera eye respectively.

Slippage five used Man Ray's film *Emak Bakia* to examine cinema's abstraction of the art object through the viewer's point of view. Slippage five drew on the work of Stephenson and Debrix (1965) to challenge traditional values about the apprehension of a reality through cinema. In slippage six I considered Gilles Deleuze's writings on elements and deterritorialisation to position the viewer as another element in a changed hierarchical apprehension of the world. On the shoulders of these combined histories, Chapter Three explored a contemporary viewer's relationship to the cinematic frame as a dance duet. Slippage seven looked at how *Experiment No. 27's* multi-medium construction both mobilised the viewer perceptually, intellectually and kinaesthetically within a system. Slippage eight, which emerged from *Experiment No. 4,* explored the viewer's fluid shifts between the agency of the dancers and the authorship of the camera. Both *Experiment No. 4* and *Experiment No. 27* stemmed from the original slippage between the proscenium and cinematic frames bringing forth the aesthetics of the frame such as the void and the edge of frame as discussed in Chapter One.

Together these slippages open-up possibilities for designing systems/platforms as dance across and between screens. Each experiment resulted in a system that can provoke a movement that, like Vertov's camera, carries the viewer's gaze in a way that allows them to become a participant in a dance. My focus on film theory through the work of Hugo Münsterberg, Rudlof Arnheim, Stephenson and Debrix and Deleuze gave new readings of my practice. And my examination of selected Soviet and European cinematic avant-garde filmmakers offered a precedent to articulate unique qualities in film aesthetics.

CONCLUSION

Throughout this thesis iterations of twenty-eight *Cinematic Experiments* were used to critically and artistically interrogated how the cinematic frame is extended *as* dance. By intertwining the work of various theorists with my own creative and collaborative efforts, I explored cinematic experimentation processes across history. Together, these exercises contributed to a wide range of critical considerations pertaining to the interdisciplinary nature of media art technologies. In this respect I am in agreement with Douglas Rosenberg's proposition that the history and impact of media art technologies are not transparent, but rather 'fraught with their own histories and add layers of meaning to the moving images' (2016: 12). Hence my focus on the experimentation and discoveries of the cinema avant-garde of the 1920s,1960s and 1970s, which I used to contextualise my own practices and those of my peers. Furthermore, the focus of my work speaks to Peter Weibel's concern that contemporary artists 'cannot make the connection between the generations and therefore exaggerate contemporary achievements' (Weibel 2011: 120). Drawing on the breadth of cinema's avant-garde history, I was able to demonstrate the ways in which artists' film and video is a distinct form of cultural practice, with its own autonomy in relation to the mainstream cinema' (Rees 2011: xi). As an interdisciplinary practice-led research study, one of my objectives was to explore precedents of change in media art practices and how through experimentation they brought about the breakdown of barriers between disciplines. With each distinct history I was able to consider dance's interaction with the cinematic frame in relationship to different periods of experimentation. The pioneering innovations of the cinema avant-garde outlined in this thesis, together with my experiments, affirm my proposal that each new and old media technology in combination with dance can create unique and important relationships between the viewer and the cinematic frame that warrant continued attention and investigation.

The following section reviews key components of my investigation that represent a practice-led contribution to a twenty-first century expanded cinema. Chapter One studied cinema pioneers Méliès and Svoboda because they closed the gap between the theatrical proscenium and cinematic frames. Building on their work,

and in homage to Sergei Eisenstein's 'dynamic square' who screamed for a cinematic frame that was responsive to the needs of the artist, I developed the notion of a hybrid frame as a cinematic frame the viewer could enter. By intertwining the evolution of twentieth and twenty-first century media architectures, my experiments interrogated the qualities of this hybrid frame. Within the hybrid frame, I explored the parameters of the void and the edge of frame and analysed their function in my twenty first century digital practices. About this hybrid frame I asked, in an aesthetic sense, what is produced, what is removed and what is discovered? I also asked by what means am I doing this? For instance, how and why am I revealing or choosing what movement is seen and what is hidden? The analysis and accomplishments of the *Cinematic Experiments* in Chapter One was precisely to demonstrate how the technologies of the hybrid frame, along with the void and the edge of frame, produce movement that can continually reframe the body in space.

In Chapter Two I located the cinematic outside of the film industry by exploring the radical shifts brought about by the expanded cinema and electronic art movements in the 1960s and 1970s. I unpacked the relevance of this expanded cinema influence on my contemporary practice and assessed the cinematic frame in three categories: the camera image (materiality), projection (reproduction) and the screen (appearance). These three categories are important because they fuse my professional practices and express my artistic treatment and sense of the potential of the cinematic frame as an expanded cinema medium. Moreover, through my practice-led research it emerged that these categories scaffold a matrix of accumulated terms germane to the cinema. The matrix shows the fluidity with which each category can acquire various aesthetic properties that can interact across all three categories. In the experiments the matrix became a useful tool to formulate and articulate principles of my research as well as facilitate further discussion of my ideas with collaborators. The matrix also became a method to analyse my experiments, and consolidate my knowledge both in language and form. Importantly, the matrix transformed working with the cinematic frame from a screen-based medium into a spatial practice where an image is simultaneously emergent, in diverse ways, in the three categories. The matrix contributes an

interdisciplinary system and language towards contemporary cinematic and screendance discourse. Although the matrix was developed specifically through my PhD experimentation, it has also been informed by my nearly forty years of artistic practice and collaborations.

In Chapter Three, experiments *No. 4 Subjective Objective* and *No. 27 Opening* contributed to an opening-up of space between and across screens and surfaces, and a virtual place for the viewer to conjure movement. With these experiments I thought through the lens of an audience as a static and moving camera. These two experiments responded to my proposal that the cinematic frame *as* dance is a powerful tool that can be used to investigate the viewer's cross-modal perception of movement and space. I introduced the concept of slippage as a mechanism to delve into this proposal and examine the ways the cinematic frame shaped, and continues to shape, the relationship between dance and the viewer. In this way the slippages gained an archaeological function, which evolved into a new prism on key figures and aspects of twentieth century film theory.

THE PROCESS OF EXPERIMENTATION WAS CRITICAL

My approaches to experimentation through the hybrid frame, the matrix and slippage confirms Rosenberg's notion that experimental attempts are 'defining new boundaries of expression, are marked by risk, a sense of danger, and the unknown' (2016: 13). Alongside analogue film processes, my experiments used a range of digital image technologies from cameras, computer editing software, interactive software, to projection and screens. I worked in a rehearsal room and film studio with dancers and a film production crew to combine these media architectures. This produced material that I then edited for sharing online, as well as forming part of an installation with media art collaborators. In the experiments, I activate a combination of cinematic apparatus in new ways to create significant changes to produce 'a new age, a new way of seeing' similar to the expanded cinema movement (Rees 2011: 25). Establishing my practice in relationship to historical works is both challenging and precarious, but it did open spaces at the seams between histories and disciplines. In many respects I am following on from the period of silent film when, as historian Liam O'Leary states, filmmakers needed

to find a ‘clear registration of movement and the choice of expressive gesture’ (O’Leary 1970: 7). While conducting my experiments, I reflected on the work of Méliès and Svoboda and how their interdisciplinary and multi-media legacy pushed the boundaries of practice against utilitarian functionality, commodification, standardisation and industrialisation. I also responded to arts practices from 1960s and 1970s when artists tried to activate the cinematic apparatus through faster camera movement, longer takes, manipulation of motion, multiple exposures and a play with focus. My experiments together with the bespoke use of media technologies place me in their shoes as one who is also working against the industrialisation of multi-media. Their pioneering innovations helped me to bridge the gaps between experimental practices and to contextualise my practice-led research as experimental in the digital domain. For example, innovations such as *Three Transitions* (1973) by Peter Campus (page 93) provides a precedent as to how experimentation entangles media technologies and human perception. My use of gestural technologies to create interpolations from gesture to data in experiments *No. 25A, B* and *C, Drumming,* and *No. 26, Jumping,* also provides new ways to generate dance movement. Programming with bespoke digital media systems, was like competing with the ubiquity of computer aesthetics. As Manovich pointed out, ‘what used to be separate moments of experimentations with media during the industrial era became the norm in a software society. In other words, the computer legitimized experimentation with media’ (Manovich 2013: 92). My approach to developing bespoke digital systems in conjunction with dance aims to challenge this norm and demonstrate an artistic research potential through creating bespoke systems that combine computer software and hardware. I tapped into a potential in dance that challenges the ubiquitous standardisation embedded in computer aesthetics and the connectivity of commercial multi-media software, as commented on by Manovich (2001) (page 36).

My artistic discoveries through dance were made in collaboration with dancers Vicki Van Hout and Lucky Lartey. These collaborations enabled me to be less subsumed by the standardisation of computational media. The dancers contributed to this as they were inspirational and interactive and were the antithesis of a technology-based medium, which is encoded in industrial

predefined parameters. In short, the dancers and their dance were not part of an industrial experimentation but were instrumental in diverting my experimentation with technological and computational software into what Manovich calls the avant-garde structure of computational media, a structure which 'is constantly being extended and redefined' (2013: 93). Our collaboration was about ideas of space, movement, the cinematic, dance traditions and points of view. In the experiments I entangled bodies, pixels, software and hardware, and revealed an unstable and subtle mix of visual media technologies. I found that between the fields of dance and media art and physical resources (people, equipment and funding) I could progress techniques of experimentation and develop a language that could be reflected upon and then layered in the next experiments. This process of enmeshing the fields of dance and media art led to a gradual expansion of our demands of the technologies.

In my practice-led research what stood out is not whether my experimentation was destabilising image technology, but rather that cinematic history reveals that which is technically correct or incorrect has no value for art and artists. As an example, when I experimented with the cinematic frame such as filming, hand processing and editing I was absorbed by how to alter perceptions of movement and space aiming to draw the viewer's attention through these transformations. This work matters because through the *Cinematic Experiments,* for instance *Experiment No. 4, Subjective Objective,* it is possible to analyse the enmeshing of movement between the cinematic frame, human bodies and points of view. Early experiments, such as experiments *No. 1, Framing, No. 2, Zooming,* and *No. 3, Changing the Frame,* made visible the production of movement through the interaction of the cinematic frame and the dance. Another key finding is the way amalgamations of the camera image (materiality), the projection (reproduction) and screen (appearance) brings forward the cinematic frame as a spatial device: A device that works in tandem with the cinematic terms listed in the matrix, and through which it is possible to identify the production of new movement and space by the cinematic apparatus.

REFLECTING ON SCREENDANCE

As background to the thesis I used my biography to express my thoughts about the limitations placed on the screendance field as a popularisation of dance through the screen. My two research methods intersected with each other raising questions about what the *Cinematic Experiments* might mean in the context of screendance. An immediate outcome was the development of my ideas about expanded cinema and how they constituted a critical approach to screendance. Working through this I was able to delve into questions posed by Erin Brannigan (2009) (page 11) concerning the integration of dance and cinema focusing in particular on the question of 'How can we determine where the dance ends and the dance film begins?' (Brannigan 2009: 122). I also developed and responded to my own questions: What is dance's role in the replication of the cinematic frame? How can the cinematic frame *as* dance (re)frame cinema as a multi-screen medium? These broader questions revealed three thesis-specific questions: i) How does the construction of the cinematic frame affect its aesthetic outcomes?; ii) What are the potential nuances between the viewer's subjective and objective perceptions?; iii) What is the interaction between the camera image (materiality), the projection (reproduction) and screen (appearance) in the replications of the cinematic frame? From here I moved on to consider how my approach to these three categories of the cinematic frame – materiality, reproduction and appearance –were key to breaking open the single screen practices in the screendance field. My research led me to propose expanded cinema as a practice that could spatialise the cinematic apparatus *as* dance. By drawing on Arnheim's notion of defamiliarization as a potential for cinema to change the viewer's perception of ordinary objects into something unfamiliar (discussed on page 117), and through my experiments I offered the viewer opportunities to see the materials of dance differently.

But it did more than this, as my research led me to questioned the impact of terms such as dance+cinema or screen+dance and ask if these were any more or less than dance? My *Cinematic Experiments* resulted in a recasting of dance+cinema as an expanded cinema practice of the twenty-first century, and the 'screen' in screen+dance as a technology. By rigorously experimenting with the nuances and qualities of the cinematic frame *as* dance I believe I have refined an area of dance+cinema experimentation. Moreover, through unpicking expanded cinema and avant-garde

practice I have contributed to and opened the field of contemporary screendance discourse. This thesis scaffolds a specific catalogue of dance+cinema experimentation which in turn broadens the history of screendance and additionally extends screendance processes, making and thinking into a new purview. I acknowledge there is a breadth of practice which is critical to screendance in the twentieth and twenty first centuries not appraised within the scope of this thesis.

If we take the definition of screendance as 'a moving image work, the content of which has choreographic compositional intention, combined with the technical and creative language of cinema' then this thesis draws attention to how much of expanded cinema was always a kind of screendance (Fildes in Pottratz 2016: 182). My proposal in this thesis was that the particular socio-economic way in which the field evolved (vis a vis relationship television broadcast such as dance for the camera), resulted in the two historical trajectories splitting away from each other. However, there remains an elasticity between the two because artists such as René Clair**,** Maya Deren, Charles Atlas, Hilary Harris, and Yvonne Rainer, who are key historical figures in dance studies, were able to cross borders and therefore kept the two fields joined. Whereas, Joan Jonas and Valie Export for example, who are from another field are less known for their contributions. I am aware however, that in this comparison between expanded cinema and screendance I am revisiting prior discussions within screendance. For instance, a comparison between screendance and expanded cinema on the necessity of defined limits was outlined in an article, '*Screendance Cannot be Everything'* published in the *International Journal of Screen Dance Vol 6* by (Fildes, Pottratz 2016: 182). My intention was not to rewrite this history but rather to propose a rationale for why it is necessary to keep thinking of these terms critically. In this way my contribution delves more deeply into what 'experimentation' might mean in screendance.

BIBLIOGRAPHY

British Dictionary (1989) second edition, Oxford, Oxford University Press

Andrew, D., J. (1976) *The Major Film Theories: An Introduction*. New York: Oxford University Press

Arnheim, R. (1974) *Art and Visual Perception: A Psychology of the Creative Eye*. New version, expanded and rev. ed. edn. Berkeley, CA: University of California Press

Arnheim, R. (1957) *Film as Art*. Berkley: University of California Press

Arnheim, R. (1982) *The Power of Centre A Study of Composition in the Visual Arts*. Los Angeles: University of California Press Berkeley and Los Angeles, California. University of California Press Ltd.

Bain, A. (1855) *the Senses and the Intellect* . London: Parker

Bastian, H. (1880) *The Brain as an Organ of Mind*. London: Kegan Paul

Batchen, G. (2006) 'Electric made Visible'. in *New Media Old Media A History and Theory Reader*. ed. by Hui Kyong Chun, W. and Keenan, T. London: Routledge, 27-44

Bazin, A. (2005) *What is Cinema? VOL 1*. 1967th edn. Berkley: University of California

Bazin, A. (1967, 2005) *' Theatre and Cinema', Volume 1 Essays Selected and Translated by Hugh Gray*. trans. by Gray H. Berkley: University of California Press

Berger, J. *Ways of Seeing, Produced by the BBC TWO* [online] available from <https://www.youtube.com/watch?v=0pDE4VX_9Kk> [20 November 2020]

Biggs, S. New Media: The 'First Word' in Art? (2009) in *In Practice-Led Research, Research-Led Practice in the Creative Arts*. ed. by Dean, RT, Smith, H. Edinburgh: Edinburgh University Press, . 66-83

Branigan, E. (1984) *Point of View in the Cinema: A Theory of Narration and Subjectivity in Classic Film*. Berlin: Mouton Publishers

Brannigan, E. (2009) 'Micro-Choreographies: The Close-Up in Dancefilm'. *International Journal of Performance Arts and Digital Media* (5), 121-139

Brown, T. *Trisha Brown Company* [online] available from <https://trishabrowncompany.org/repertory/homemade.html> [19 November 2020]

Brown, T. *Homemade by Trisha Brown. from Early Works (1966)* [online] available from <https://www.youtube.com/watch?v=OrrNrfucoB0&feature=youtu.be https://trishabrowncompany.org/repertory/homemade.html https://betweenmeandtheotherworld.wordpress.com/2012/01/07/trisha-browns-homemade-1966/> [2019]

Bruno, G. (2014) *Surface Matters of Aesthetics. Materiality, and Media*. Chicago: University of Chicago Press

Bukhari, K. (2017) ''Movements of Media in Yvonne Rainer's *Hand Movie* (1966) and Richard Serra's *Hand Catching Lead* (1968)''. *The International Journal of Screen Dance* vol. 8.

Burian, J. (1971) *The Scenography of Josef Svoboda*. Connecticut.: Wesleyan University Press

Casetti, F. (2011) 'Beyond Subjectivity: The Film Experience'. in *Subjectivity Filmic Representation and the Spectator's Experience.* ed. by Chateau, D. Amsterdam: Amsterdam University Press, 53-68

Chateau, D. (2011) 'Beyond Subjectivity: The Film Experience'. in *Subjectivity Filmic Representation and the Spectator's Experience.* ed. by Chateau, D. Amsterdam: Amsterdam University Press, 12

Crary, J. (1992) *Techniques of the Observer on Vision and Modernity in the Nineteenth Century.* Cambridge Massachusetts: MIT Press

Crisafulli, F. (2013) *Active Light Issues of Light in Contemporary Theatre*. Dublin: Artdigiland

Cubitt, S. (2005) *The Cinema Effect*. Cambridge: MIT Press

Cunningham, M. *Merce Cunningham Trust Website* [online] available from <https://www.mercecunningham.org/> [20 November 2020]

Cunningham, M. (1997) 'Four Events that have Led to Large Discoveries (19 September 1994)'. in *Merce Cunningham: Fifty Years*. ed. by Vaughan, D.: New York Aperture

Currie, G. (2011) 'the Representation of Film Experience'. in *Subjectivity Filmic Representation and the Spectator's Experience.* ed. by Chateau, D. Amsterdam: Amsterdam University Press, 41-52

Curtis, D. (2017) *the After Lives of these Films – what Time has done these Films After the End of Art .. DIAS 1966 (Symposium)*

de Biran, M. (1949) 'Concideratios Sur Les Principles d'Une Divisions Des Faits Psychologiques Et Psychologiques, Oeuvres Des Maine De Biran'. in . ed. by Tisserand, PAGE. , 180

Deleuze, G. (1986) *Cinema 1 the Movement -Image* trans. by Tommlinson, H. and Haberjam, B. Minneapolis.: University of Minnesota Press

Dodds, S. (2004) *Dance on Screen: A Contextual Framework. in: Dance on Screen.* London: Palgrave Macmillan

Eisenstein, S. (2010) 'The Dynamic Square'. in *Writings, 1922-1934 Sergei Eisenstein Selected Works Volume 1*. ed. by Taylor, R. London: I.B. Tauris, 206-218

Fildes S, Pottratz W. (2016) 'Screendance Cannot be Everything: Defining the Form Ten Years After the (Hu)Manifesto'. International Screen Dance Journal Vol 6

Frampton, H. https://www.criterion.com/current/posts/2264-a-lecture

Friedberg, A. (2006) *the Virtual Window: From Alberti to Microsoft*. Cambridge Massachusetts: The MIT Press

Friedberg, A. (1993) *Window Shopping Cinema and the Post Modern* . Berkley: University of California Press

Gidal, PAGE. (1980) '12. Technology and Ideology in/through/and Avant-Garde Film: An Instance'. in *the Cinematic Apparatus*. ed. by De Lauretis, T. & Heath, S. New York City: Macmillan Publishers Limited, 151 -171

Girin, D. S. *Valie Export Space Seeing/Space Hearing (1973/74)* [online] available from <http://www.newmedia-art.org/cgi-bin/show-oeu.asp?ID=150000000043168&lg=GBR> [Nov 11 2019]

Gunning, T. (2009) 'The Long and the Short of it: Centuries of Projecting Shadows, from Natural Magic to the Avant-Garde'. in *Art of Projection*. ed. by Douglas, S. and Eamon, C. London: Hatje Cantz, 23-34

Gunning, T. (2006) 'Weaving a Narrative Style and Economic Background in Griffith's Biography Films'. in *Early Cinema Space Frame Narrative*. ed. by Elsaesser, T. and Barker, A. London: BFI Publishing, 336-347

Hammer B. The Discussion- Expanded Cinema, January 4th 2016, Microscope Gallery [online] available from <https://vimeo.com/150960035> [2019]

Hammond, PAGE. (1974) *Marvellous Méliès*. London: Gordon Fraser

Holmes, N. (2016) 'Rudolf Arnheim: Cinema and Partial Illusion'. in *Thinking in the Dark Cinema, Theory, Practice*. ed. by Pomerance, M. and Palmer, B,R. New Brunswick: Rutgers University Press, 101-112

Holt, N. *Video Data Bank* [online] available from <http://www.vdb.org/artists/nancy-holt> [20 November 2020]

Iles, C. (2001) 'between the Still and Moving Image in *into the Light: The Projected Image in American Art 1964-1977.*'. in . ed. by Abrams, N. New York: Whitney Museum of American Art, 45-46

Jenkins, B. (ed.) (2009) *on the Camera Arts and Consecutive Matters – the Writings of Hollis Frampton.* Cambridge, Mass.: MIT Press, Cambridge, Mass.

Kappenberg, C. *'Does Screendance Need to Look Like Dance?*' (2009) [online] available from <http://dvpg.net/docs/CKpaper_DanceasFilm_19May09.pdf> [20 November 2020]

Koeck, R. (2013) *Cine-Scapes Cinematic Spaces in Architecture and Cites*. Abingdon: Routledge

Krauss, R. (1978) 'Video: The Aesthetics of Narcissism'. in *New Artists Video A Critical Anthology*. ed. by Battcock, G. : Dutton, 43-64

Kuenzli, R. (ed.) (1996) *Dada and Surrealist Film.* 2nd edn. Cambridge Massachusetts: MIT Press

Laterna magika /The first multimedia theatre ever. *Laterna Magika: Wonderful Circus* [online] available from <https://www.youtube.com/watch?v=LrUMYz5_Syc> [20 November 2020]

Langdale, A, (2002) Hugo Münsterberg's Photoplay and Other Writings on Film, edited, with an introduction by Allan Langdale, New York: Routledge, 2002.

Le Grice, M. (2011) 'Time and the Spectator in the Experience of Expanded Cinema'. in *Expanded Cinema Art Performance Film*. ed. by Curtis, D., Ball, S., and White, D. London: Tate, 160-170

Le Grice, M. (2005) *Real Time/Space', Art and Artists Dec 1972.* [online] available from <https://www.luxonline.org.uk/artists/malcolm_le_grice/horror_film_1.html> [11, Nov 2019]

Lemon, T. and Reis, J.,M. (eds.) (1965) *Russian Formalist Criticism: Four Essays.* trans. by Lemon, T. and Reis, J.,M. Lincoln: University of Nebraska Press, 1965

Levine, L. (1978) 'One-Gun Video Art'. in New Artists Video A Critical Anthology. ed. by Battcock, G. New York: Dutton, 76-94

Lyne, C. (2017) *Frames and Containers* [online] available from <http://mediacommons.futureofthebook.org/intransition/2017/05/31/frames-and-containers-0> [April 16 2018]

Manning, E. (2009) *Relationscapes, Movement, Art, Philosophy*. Cambridge Massachusetts: The MIT Press

Manovich, L. (2013) *Software Takes Command*. New York City: Bloomsbury

Manovich, L. (2001) *the Language of New Media*. Cambridge Massachusetts: The MIT Press

McCall, A 'Two Statements' in The Avant-Garde Film page.253/254 in Walley, J. (2007) 'Paracinema of Anthony McCall and Tony Conrad'. in *Avant-Garde Critical Studies, Volume 23*. ed. by Graf, A. and Scheunemann, D. Amsterdam: Rodopi

McDonald, K. (2016) *Film Theory the Basics*. Oxon: Routledge

Michelson, A. (ed.) (1984) *The Writings of Dziga Vertov.* Tran O'Brien, K. edn. Berkeley USA: The Regents of the University of California

Microscope Gallery *the Discussion on Expanded Cinema, January 4th 2016, Microscope Gallery* [online] available from <https://www.youtube.com/watch?v=5xCi5E_zsV4> [Nov 11 2019]

Mitoma, J. (2002) 'Introduction'. in *Envisioning Dance of Film and Video*. ed. by Mitoma, J. and Zimmerman, E. New York: Routledge, xxxi-xxxi

Moure, J. (2011) 'the Cinema as Art of the Mind: Hugo Münsterberg, First Theorist of Subjectivity in Film.'. in *Subjectivity Filmic Representation and the Spectator's Experience.* ed. by Chateau, D. Amsterdam: Amsterdam University Press, 23-40

Mullik, G. (2019) *Eisenstein's Collision Montage* [online] available from <https://www.academia.edu/31964928/Eisensteins_Collision_Montage> [2019]

Münsterberg, H. (1970) *Hugo Münsterberg, the Film: A Psychological Study the silent photoplay 1916*. New York: Dover Publications, Inc

Nancy, J. L. (2001) *The Evidence of Film*. Bruxelles: Yves Gevaert

Nelson, R. (2013) *Practice as Research in the Arts Principles, Protocols, Pedagogies, Resistances*. Basingstoke: Palgrave Macmillan

Neromagazine (2017) *Sergei Eisenstein: The Anthropology of Rhythm at Nomas Foundation, Rome* [online] available from <http://www.neromagazine.it/n/?p=33073> [2019]

O'Leary, L. (1965) *The Silent Cinema*. 2nd edn. Suffolk: Studio Vista Limited

Olenina, A. (2016) 'Moto -Bio- Cine -Event, Construction of Expressive Movement in Soviet Avant-Garde Film' in *Oxfordhandbook of Screendance Studies*. ed. by Rosenberg, D. Oxford: Oxford University Press, 80-101

Patton, PAGE. (ed.) (1996) *Deleuze A Critical Reader.* Oxford: Blackwell

Porter, J. (2016) 'Dance with Camera A Curator's POV'. in *Oxfordhandbook of Screendance Studies*. ed. by Rosenberg, D. Oxford: Oxford University Press, 23-44

Rees, A. L. (2011) *A History of Experimental Film and Video from the Canonical Avant-Garde to Contemporary British Practice*. 2nd edn. London: Palgrave Macmillan

Rees, A. L. (2011) 'Expanded Cinema and Narrative: A Troubled History'. in *Expanded Cinema Art Performance Film*. ed. by Ball, S., Curtis, D., and White, D. London: Tate, 12-21

Renan, S. (1967) *An Introduction to the American Underground Film*. New York: E.PAGE. Dutton & Co., Inc.

Rodowick, N. (1997) *Gilles Deleuzes Time Machine.* North Carolina, Duke University Press.

Rosenberg, D. (ed.) (2016) *Oxfordhandbook of Screendance Studies.* Oxford: Oxford University Press

Rosenberg, D. (2012) *Screendance Inscribing the Ephemeral Image*. Oxford: Oxford University Press

Rosenberg, S. (2012) 'Trisha Brown: Choreography as Visual Art'. *October* Vo1. 140 (Spring), 18-44

Salter, C. (2010) *Entangled Technology and the Transformation of Performance*. London: MIT Press

Shaw, J. and Weibel, PAGE. (2003) *Future Cinema: The Cinematic Imaginary After Film*. Cambridge MA: The MIT Press

Smith, R. (2014) 'Kinaesthesia and Touching Reality'*. 19: Interdisciplinary Studies in the Long Nineteenth Century, 19* 0 (19), 1-27

Spencer, H. (1872) *The Principles of Psychology,* 2nd, 2 vols edn. London: Williams and Norgate

Stephenson, R. Dedrix. J. R. (1965) *The Cinema as Art*. Great Britain: Penguin Books

Tawa, M. (2010) *Agencies of the Frame: Tectonic Strategies in Cinema and Architecture*. Newcastle upon Tyne: Cambridge Scholars Publishing.

Thomas Allen, J. (1980) 'The Industrial Context of Film Technology: Standardistation and Patents.'. in *The Cinematic Apparatus*. ed. by De Lauretis, T. & Heath, S. London: The Macmillan Press LTD, 26-35

Treske, A. (2011) 'Frames within Frames - Windows and Doors'*. Video Vortex Reader, the Institute of Network Cultures Amsterdam* Moving Images Beyond Utube (2), 25-34

Turim, M. (1980) '11. the Place of the Visual'. in *The Cinematic Apparatus*. ed. by De Lauretis, T. & Heath, S. New York City: Macmillan Publishers Limited, 143 -149

Vaughan, D. (2002) 'Merce Cunningham's Choreography for the Camera.'. in *Envisioning Dance of Film and Video*. ed. by Mitoma, J. Z., E. New York: Rougtledge, 34-39

Walley, J. (2007) 'Paracinema of Anthony McCall and Tony Conrad'. in *Avant-Garde Critical Studies, Volume 23*. ed. by Graf, A. and Scheunemann, D. Amsterdam: Rodopi, 355-382

Walley, J. (2003) 'the Material of Film and the Idea of Cinema: Contrasting Practices in Sixties and Seventies Avant-Garde Film'*. October* Vol. 103 (Winter, 2003), Published by: The MIT Press (15), 30

Walley, J. (2020) Home page [online] available from <https://denison.edu/people/jonathan-walley> [18 November 2020]

Weibel, P. (2011) 'Expanded Cinema, Video and Virtual Environments'. in *Expanded Cinema Art Performance Film*. ed. by Curtis, D., Ball, S., and White, D. London: Tate, 110-124

White, D. (2011) 'Expanded Cinema Up to and Including its: Perception, Participation, and Technology'. in *Expanded Cinema Art Film Performance*. ed. by Rees, A. L., White, D., Ball, S., and Curtis, D. London: Tate Publishing, 226-241

Whyte, C. (2016) 'Selective Histories Moving Image from the Late Nineteenth Century to the Early Twenty-First '. in *Oxfordhandbook of Screendance Studies*. ed. by Rosenberg, D. Oxford: Oxford University Press, 63-77

Wood, K. (2016) 'Kinesthetic Empathy Conditions for Viewing' in *Oxfordhandbook of Screendance Studies*. ed. by Rosenberg, D. Oxford: Oxford University Press, 245 -261

Vertov, D. (1922) WE: Variant of a Manifesto [online] available from <https://monoskopage.org/images/6/66/Vertov_Dziga_1922_1984_We_Variant_of_a_Manifesto.pdf> [18 November 2020]

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REFERENCE FILMS VIDEOS AND ARTISTS

INTRODUCTION

Dumas, R. *Australian Choreographer*
[online] available from <www.russelldumas.com> [20 November 2020]

Lyne, C. (2017) *Frames and Containers*
[online] available from <https://vimeo.com/219270731> [20 November 2020]

Medlin, M. (2007) *Quartet*
[online] available from <https://unsited.org/2015/08/05/media-art/> [20 November 2020]

Medlin, M. (2002) *Miss World*
[online] available from <https://vimeo.com/164841343> [20 November 2020]

Medlin, M. (1996) *90% Yield before Breakage*
[online] available from <https://vimeo.com/163742282> [20 November 2020]

Medlin, M. (1996) *Mobility in an Artificial City*
[online] available from <https://vimeo.com/165747729> [20 November 2020]

Motion Bank. *Phase One* (2010-2013)
[online] available from <http://motionbank.org/en/content/about.html>

[20 November 2020]

Stevens, K. *Marcs Lab, University of Western Sydney*
[online] available from
<https://www.westernsydney.edu.au/marcs/our_team/researchers/professor_kate_stevens> [20 November 2020]

CHAPTER 1

Aggiss, L *Men in Wall* (2003).
Company in Space's *The Light Room* (2002)
Gance, A. *Napoléon* (1927)
Gibson, R. Martelli, B. *Summer Branch* (2005/6)
Gibson, R. M., B. *Gibson/Martelli*
[online] available from <https://vimeo.com/gibsonmartelli> [18 November 2020]
Gibson, R. and Martelli, B. *Man A* series (2014 – 2015)
Lozano-Hemmer, R. (2020) *People of People*
[online] available from <https://lozano-hemmer.com/people_on_people.php>
[18 November 2020]
McLaren, N. (1968) *Pas De Deux*.
[online]
[18 November 2020]
Maganiya Seduction (2006)
Méliès, G. (1903) *the Melomaniac*
[online]
[18 November 2020]
Méliès, G. (1902) *Man with the Rubber Head*
[online]
[18 November 2020]
Méliès, G. (1900) *the One Man Band*.
[online]
[18 November 2020]
Méliès, G. (1898) *the Four Troublesome Heads*.
[online]
[18 November 2020]
Obarzanek, G. *Glow* (2006)

Palazhy, J. *Scanned* (2002)

Papastergiadias, N., McQuire, S., Gibson, R., Yue, A., Cubitt, S., Cmielewski, C., Choi, D., Barikin, A., and Gu, X. *Project Large Screens and the Transnational Public Sphere (2009–14)* [online] available from <https://arts.unimelb.edu.au/research-unit-in-public-cultures/research/past-projects/large-screens-and-the-transnational-public-sphere> [19 November 2020]

Scott, R. *Blade Runner* (1982)

Sky, H. *Trial by Video* (1997)

Sky, H. is an Australian digital choreographer/performer/director/writer.

Snibbe, S. (2002) *Deep Walls*. [online] available from <https://www.snibbe.com/digital-art> [18 November 2020]

Snibbe, S. (1998) *Boundary Functions* [online] available from <https://www.snibbe.com/digital-art> [18 November 2020]

Svoboda, J. (1977) *Wonderful Circus.* [online] [18 November 2020]

Umeda, H. *Accumulated Layout* (2009)

Weiss, F. *Glow* (2006)

Ziegler, C. *Scanned* (2002)

CHAPTER 2

Atlas, C., Cunningham, M., and June Paik, N. (1978) *Blue Studio: Five Segments (excerpt)* [online] available from <https://vimeo.com/280936277> [19 November 2020]

Brown, T. *Homemade (1966)*

Buñuel Luis Un Chien Andalou (1929)

[online] available from <https://trishabrowncompany.org/repertory/homemade.html> [19 November 2020]

Campus, P. (1973) *Three Transitions (Excerpt)*. [online] [19 November 2020]

Cocteau J. *Orpheus* (1950)

Cunningham M. and Atlas C. *Fragments 1* (1976)

Cunningham M. *Locale* (1979)

Cunningham M. *Torso* (1976)

Export V. *Space Seeing/Space Hearing* (1973/74)

Frampton, H. *A Lecture* [online] available from <https://www.criterion.com/current/posts/2264-a-lecture> [19 November 2020]

Holt, N. *Holt Video Data Bank* [online] available from <http://www.vdb.org/artists/nancy-holt> [19 November 2020]

Jonas, J. (1972) *Vertical Roll*
[online]
[19 November 2020]

Le Grice, M. *Berlin Horse* (1970)

Le Grice, M. (1971) *Horror Film*.
[online] available from
<https://www.luxonline.org.uk/artists/malcolm_le_grice/horror_film_1.html>
[19 November 2020]

McCall, A. (1973) *Light Describing A Cone*.
[online] [19 November 2020]

Rainer, Y. (1966) *Hand Movie (1966)*.
[online] available from <https://vimeo.com/99280678> [19 November 2020]

Richter, H. (1923) *Rhythm 23 (1923)*.
[online]
[19 November 2020]

Serra, R. (1968) *Hand Catching Lead* .
[online]
[19 November 2020]

Sharits, P. (1966) *Mandala Films Trailer*
[online]
[19 November 2020]

Sherwin, G. (1976-2011)
[19 November 2020]

CHAPTER 3

Berger, J. (1972) *Ways of Seeing*
[online] 20 November 2020]

Choy, K. F. [online] available from <https://www.frascatitheater.nl/softmachine-eng?language=en> [24 November 2020]

Clair, R. (1924) *entr'act*
[online] [20 November 2020]

Griffith, D., W. (1919) *Broken Blossom*
[online] [20 November 2020]

Griffith, D., W. (1916) *Intolerance*
[online]
[20 November 2020]
Griffith, D., W. (1915) *Birth of a Nation*
[online]
[20 November 2020]
Ray, M. (1926) *Emak-Bakia*.
[online] [20 November 2020]
Vertov, D. (1929) *Man with the Movie Camera*.
[online]
[20 November 2020]
Zabel, G. *A Lecture*.
[online]
[20 November 2020]

EXPERIMENTS LINKS LIST

Below is the full list of iterations of my experiments on Vimeo. Experiments not discussed in the thesis are highlighted in yellow. If you would like to watch the highlighted items the password is medlin. Please note, the commentary provided on Vimeo is for the general public and therefore not necessarily specific to this thesis. The ideas relevant to this PhD are discussed within the thesis.

Vimeo URL: *Experiment No. 1 The Frame* https://vimeo.com/230261586
Vimeo URL: *Experiment No. 2 Zooming* https://vimeo.com/288141540
Vimeo URL: *Experiment No. 3* Changing the Frame https://vimeo.com/288142639
Vimeo URL: *Experiments No. 4A Objective Subjective* Impro1
https://vimeo.com/260537829
Vimeo URL: *Experiments No. 4B Objective Subjective* Impro2
https://vimeo.com/263564206
Vimeo URL: *Experiments No. 4C Objective Subjective* Impro3
https://vimeo.com/263595045
Vimeo URL: *Experiments No. 4 Objective Subjective Impro3*
https://vimeo.com/263684059
Vimeo URL: *Experiments No. 4 Objective Subjective Impro3 Fades*
https://vimeo.com/264533758
Vimeo URL: *Experiments No. 4D Objective Subjective Impro5 Mirrors*
https://vimeo.com/263526439
Vimeo URL: *Experiment No. 5A The Void* https://vimeo.com/316684724
Vimeo URL: *Experiment No. 5B The Void* https://vimeo.com/316684827
Vimeo URL: *Experiment No. 5C The Void - Four Screens* https://vimeo.com/263953765
Vimeo URL: Documentation *Experiment No. 5D* https://vimeo.com/349028590
Vimeo URL: *Experiment No. 6 Analogue and Digital* https://vimeo.com/447336799
Vimeo URL: *Experiment No. 6A Analogue and Digital* https://vimeo.com/441908899
Vimeo URL: *Experiment No. 6B Analogue and Digital* https://vimeo.com/406802767
Vimeo URL: *Experiment No. 6C Spinifex x 3* https://vimeo.com/406979641
Vimeo URL: *Experiment No. 7 Perspectives* https://vimeo.com/264031362
Vimeo URL: *Experiment No. 8 Interference* https://vimeo.com/288138417
Vimeo URL: *Experiment No. 8A Interference* https://vimeo.com/424477234
Vimeo URL: *Experiment No. 8B Interference* https://vimeo.com/447360634

Vimeo URL: *Experiment No. 9 Inside the Frame* https://vimeo.com/288139127
Vimeo URL: *Experiment No. 10 Layering* https://vimeo.com/288141288
Vimeo URL: *Experiment No. 10A Layering* https://vimeo.com/235137499
Vimeo URL: *Experiment No. 11 Theatre & Cinema Compile* https://vimeo.com/293740924
Vimeo URL: *Experiment No. 11A Theatre & Cinema Frames* https://vimeo.com/406821198
Vimeo URL: *Experiment No. 12 Cinematic Frame* https://vimeo.com/244074886
Vimeo URL: *Experiment No. 12A Hybrid Frame* https://vimeo.com/297589602
Vimeo URL: *Experiment No. 12B Hybrid Frame 2* https://vimeo.com/297590513
Vimeo URL: *Experiment No. 13 Studies in Framing* https://vimeo.com/467580773
Vimeo URL: *Experiment No. 14 Studies in Framing* https://vimeo.com/311376923
Vimeo URL: *Experiment No. 14B Studies in Framing* https://vimeo.com/311393420
Vimeo URL: *Experiment No. 15A The Camera Moves* https://vimeo.com/311664082
Vimeo URL: *Experiment No. 15B The Camera Moves* https://vimeo.com/311776848
Vimeo URL: *Experiment No. 15C Depth of Field* https://vimeo.com/311610530
Vimeo URL: *Experiment No. 15D The Camera Moves* https://vimeo.com/311649019
Vimeo URL: *Experiment No. 15E Le Corbusier* https://vimeo.com/411678022
Vimeo URL: *Experiment No. 15F Re-Frame* https://vimeo.com/441913385
Vimeo URL: *Experiment No. 16 Scale and Synchronisation* https://vimeo.com/262852193
Vimeo URL: *Experiment No.16A Close-up Frame* https://vimeo.com/311828093
Vimeo URL: *Experiment No.16B Full Sequence* https://vimeo.com/311834174
Vimeo URL: *Experiment No.16C Manipulated Fragments* https://vimeo.com/349050071
Vimeo URL: *Experiment No.17 Textured Frame* https://vimeo.com/311861383
Vimeo URL: *Experiment No.17B Digital Duet* https://vimeo.com/406754465
Vimeo URL: *Experiment No.18 Edge of Frame* https://vimeo.com/311865337
Vimeo URL: *Experiment No.18B Edge of Frame Accumulation* https://vimeo.com/330585079
Vimeo URL: *Experiment No.19A Analogue Optical Effects* https://vimeo.com/313954108
Vimeo URL: *Experiment No.19B The Frame as a Sculptor* https://vimeo.com/313954295
Vimeo URL: *Experiment No. 19C The Frame as a Sculptor* https://vimeo.com/313954453
Vimeo URL: *Experiment No. 19D Hand-Processing Workshop* https://vimeo.com/313954719
Vimeo URL: *Experiment No. 19E The Frame as a Sculpture* https://vimeo.com/316686955
Vimeo URL: *Experiment No. 19F The Frame as a Sculpture* https://vimeo.com/406781926

Vimeo URL: *Experiment No. 20 Paper Smashing Real-Time*
https://vimeo.com/314379644
Vimeo URL: *Experiment No. 20A Slow Motion Paper Smashing*
https://vimeo.com/316706862
Vimeo URL: *Experiment No. 21 Rectilinear Lines* https://vimeo.com/314690392
Vimeo URL: *Experiment No. 22 Depth of Field* https://vimeo.com/314698203
Vimeo URL: *Experiment No. 23 Making Motion* https://vimeo.com/310274218
Vimeo URL: *Experiment No. 23A Handmade Emulsion* https://vimeo.com/237041295
Vimeo URL: *Experiment No. 23B Hand Made Emulsion* https://vimeo.com/424467583
Vimeo URL: *Experiment No. 24* EFX *Camera vs Post-Production*
https://vimeo.com/316688744
Vimeo URL: Documentation *Experiment No. 25 A, B & C Drumming*:
https://vimeo.com/330579860
Vimeo URL: Documentation *Experiment No. 26 Jumping*: https://vimeo.com/330597577
Vimeo URL: Documentation *Experiment No. 27 Openings*: https://vimeo.com/330604208
Vimeo URL: *Experiment No. 28A Split Screen Long* https://vimeo.com/407009957
Vimeo URL: *Experiment No. 28B Split Screen Short* https://vimeo.com/446341166

ACKNOWLEDGEMENTS

CINEMATIC EXPERIMENTS

Cinematic Experiments was presented by The Substation, Melbourne, and was hosted as an artist residency by the Altona Gate Shopping Centre between January 21 to March 18, 2019.

Credit goes to media artists: Fausto Brusamolino, Rhian Hinkley, Margie Medlin and Olaf Meyer. Dancemakers are Vicki Van Hout and Lucky Lartey. Interaction design is by Olaf Meyer, sound design by James Wilkinson. Film lighting was done by Fausto Brusamolino and cinematography by Jane Castle, Martin Fox and Margie Medlin. The producer and researcher was Margie Medlin.

DANCE ARTISTS

Vicki Van Hout is an Indigenous independent artist with over 20 years of experience. A graduate of NAISDA Dance College and the Martha Graham School of Contemporary Dance in New York, Vicki went on to perform with major Indigenous dance companies Bangarra Dance Theatre and the Aboriginal Islander Dance Theatre before joining forces with Marilyn Miller as a founding member of Fresh Dancers. Her show Briwyant was the first ever show by an independent Indigenous choreographer to tour nationally and was nominated for an Australian Dance Award for Best Achievement in Independent Dance. Vicki was awarded the 2014 NSW Dance Fellowship for established and mid-career artists – the first Indigenous winner of the Fellowship.

Lucky Lartey founded Lucky African Dance in 2012 to share his love for African performance arts and culture with Australia. Lucky is also at the forefront of intercultural and fusion choreography in Australia seen in his original choreographies and work with the Jamestown Collective – Jamestown! Lucky is an accomplished and experienced African dancer both in Ghana and Australia and has more than 18 years of training and experience in traditional African dance and Afro contemporary dance. Lucky's performance repertoire includes choreography from traditional African, gumboot dance, and afro-contemporary dance.

MEDIA ARTISTS

Fausto Brusamolino is a lighting designer and creative coder based in Sydney, Australia. Fausto designs lighting for live performances and filming, creates his own lighting installations, and provides lighting designs for other artists' artworks and exhibitions. Fausto's approach to lighting design embraces a wide range of visual techniques, deploys specifically made lighting, mechanical objects, and uses creative coding to build custom made software. In his work, creative coding is used as a tangible platform for personal research for prototyping visual solutions, and for real time control of lighting and other scenic effects.

Rhian Hinkley is a theatre maker and new media artist based in Melbourne. He is currently the Artistic Director of *Nebula,* a portable studio/theatrical space run by Arts Access Victoria. Nebula has toured extensively throughout Victoria delivering accessible arts programs to a wide range of community groups and individuals. For the past ten years he has collaborated on numerous works with artists with disability including the theatrical show *Singular* 2014 and *Under my skin* 2016. Rhian has a longstanding relationship with Back to Back theatre creating the projected components of *Lady eats Apple* 2016, *Ganesh Versus The Third Reich* 2011, *Food Court* 2008 and *Soft* 2002.

Olaf Meyer is a multimedia installation artist based in Melbourne. Meyer has formal technical training in computer animation and interactive media and has been active in producing experiential work with input from engineers, community groups and the performing arts. He is multi skilled in all areas of design – project development, design and motion graphics production and has extensive experience in team-oriented production environments with a focus on animation and technical direction. His research interests include custom sensor technology and generative techniques with software.

James Wilkinson works in the performing arts as a trombonist, composer, puppeteer, sound engineer, writer, and educator and Swinburne Universtiy of Technology. A graduate of the Victorian College of the Arts (BMus) and Charles Sturt University – Riverina (BA sound) his teaching experience includes private trombone lessons, international theatre workshops, and lecturing in audio technology at RMIT University Melbourne and La Salle College of the Arts Singapore. Fascinated by the world of sound his work focuses on the broader understanding of listening, performing, and production of audio in all its forms. His teaching methodology is framed by his experience working in audio production and performing and creating music for concert and theatre.

CINEMATOGRAPHERS

Jane Castle is a multi-award-winning filmmaker, cinematographer and community artist who has worked in the US, UK and Australia on numerous feature films, documentaries and music videos. Her work has been recognised by the Australian Film Institute, Australian Cinematographer's Society, Kodak Awards, Dendy Awards and Queer Screen. Jane shot and directed for Alphaville the SBS funded documentary *60,000 Barrels* about a community's fight with a toxic producing industry. Jane is an environmental campaigner for the Total Environment Centre and Greenpeace. She also co-created *Ends of the Earth* with Linda Dement, an installation responding to climate change, for the SA School of Arts and the Centre D'Art I Natura in Farrera, Catalonia.

Martin Fox has a 35 year career as a video artist, professional editor, sound recordist and director, mostly for film and documentaries as well as for a number of dance productions. Martin was a video artist for De Quincey Co's *Metadata*, Linda Luke's solo *Still Point Turning*, and Dean Walsh's *Fathom* as well as editing video for several dance works, including Margie Medlin's dance film *Morphing Physiology*; Ros Warby's dance performances *Monumental* and *Tower Suites*. Recent film directing credits include, William Yang's *My Generation*, *Blood links* and *Friends of Dorothy,* and editor for feature films *6 Plots*, *Dalkeith*, and *Deeper than Blue*. Television documentaries include; *Riot or Revolution*; ABC's *Eureka Stockade Bob Brought the War Home*, *MeMeMe* and *ADHD*; *The Choice: Personal Stories About Abortion*, and *Alter Ego and Endangered* (all for SBS).

ORGANISATIONS AND FUNDING

The research took place as part of three short residencies. One at Critical Path, Sydney in January 2017. Then in January 2018 at FORM Dance Projects and at the Creative Practice Research Unit at the University of New South Wales, both in Sydney, Australia. The development and presentation of the *Cinematic Experiments* was funded by the Emerging and Experimental Fund of the Australia Council for the Arts.